

New Jersey Cross-Content Workplace Readiness Curriculum Framework

A Road Map for Learning





New Jersey Cross-Content Workplace Readiness Curriculum Framework: A Road Map for Learning

*A Document in Support of the
Cross-Content Workplace Readiness Standards*

DONALD T. DIFRANCESCO
Acting Governor

VITO A. GAGLIARDI, SR.
Commissioner of Education

JAY DOOLAN
Acting Assistant Commissioner of Education
Division of Academic and Career Standards

ROBERT J. RIEHS
Acting Director
Office of Standards and Professional Development

THOMAS A. HENRY
Director
Office of School-to-Career and College Initiatives

ANN DIGIACOMO
Workplace Readiness and Framework Project Coordinator
Office of Standards and Professional Development

WILLIAM D. MILLER
Framework Project Coordinator
Retired AT&T District Manager



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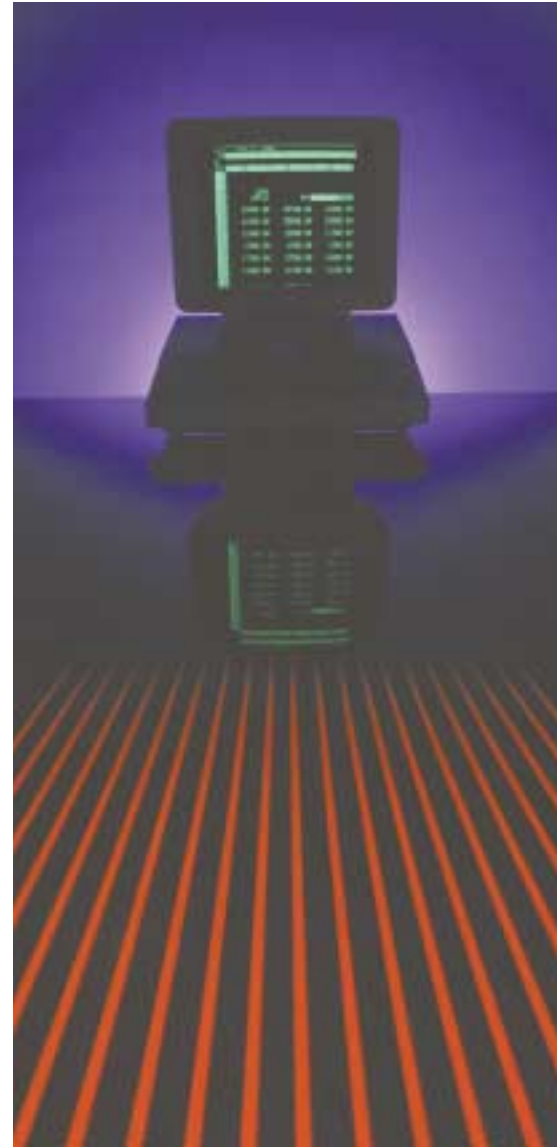


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Historical Background

On May 1, 1996, the State Board of Education adopted Core Curriculum Content Standards, including standards in seven academic content areas and Cross-Content Workplace Readiness Standards that apply to all subject areas. Since the adoption of these standards, frameworks have been developed to assist local districts in the implementation of the standards. In June 1999, the New Jersey Department of Education convened a committee of distinguished K-12 educators, representatives of higher education, and professionals in the workplace. The committee was charged with designing a Cross-Content Workplace Readiness Curriculum Framework for New Jersey, in accordance with N.J.A.C. 6A:8-3.2(a)1.

The Need for Workplace Readiness

As stated in the Core Curriculum Content Standards document (page iv), we live in an age of exploding knowledge and rapid change in technology, information exchange, and communications. The changes that are taking place in our society have increased the demand for internationally competitive workers. Because today's students will be employed through the middle of the twenty-first century, they will need increasingly advanced levels of knowledge and skill. To gain and retain high-wage employment that provides job satisfaction, they will also need to continue to learn throughout their lives. The role of the educational system is to deliver instructional programs that provide a world-class education for students entering a complex, rapidly changing, highly competitive, interdependent world.

In a 1992 national report, the Secretary's Commission on Achieving Necessary Skills (SCANS) identified several concepts students need to master to be successful in the world of work. The SCANS Workplace Competencies include the productive use of resources, interpersonal skills, information, systems, and technology. The SCANS Foundation Skills include basic skills, thinking skills, and personal qualities.

To compete in a global, information-based economy, students must be able to solve problems, reason effectively, and make logical connections. The world of work they enter will feature products and factories that are designed by mathematical models and computer simulations, computers that control production processes and plants, and robots. Our state and country need people with the skills to develop and manage new technologies.



The Intent and Content of the Framework

The intent of this framework is to support the educational reform that was initiated by the New Jersey Core Curriculum Content Standards. The standards seek to generate higher levels of achievement for all students and to assist districts in the development of curriculum that fosters lifelong learning skills and the skills necessary for an effective transition into the workplace and/or postsecondary education. This framework emphasizes interdisciplinary and systems approaches and the integration of the Cross-Content Workplace Readiness Standards into the academic areas. It is designed to provide guidance for the infusion of the Cross-Content Workplace Readiness Standards into the school district's curriculum and teachers' lesson plans. It is *not* intended to be a substitute for the district curriculum. The sample activities included in the framework are offered as ideas to help educators revise or create their own activities in support of the standards. The standards have specified results but not the means of achieving them, affirming the importance of local district decision-making and discretion. The local district is in the best position to choose the curriculum designs and instructional strategies that are most appropriate for its students. For this reason, the activities included in the framework are to be considered merely as examples. They are not mandated.

A Systems Approach to Cross-Content Workplace Readiness

Chapter 1 describes the design model for implementing the Cross-Content Workplace Readiness Standards. The framework uses interdisciplinary and integrated instruction, which combines several academic content disciplines in a common lesson or activity. Processes for systems thinking and design are introduced, and their relationships to each other are established. These processes can be followed by educators to create specific instructional programs and to guide students in completing project-based assignments.

Project-Based Learning

Chapter 2 describes the learning process and the steps to project-based learning, and offers reasons for implementing project-based learning. A comparison of traditional instruction and project-based instruction is presented.





Portfolios

Chapter 3 guides teachers and counselors in the purpose, structure, assessment, and reliability of career development and project-specific portfolios for the implementation of Cross-Content Workplace Readiness Standards. Portfolios provide a documented, cumulative record in many areas of student achievement. They are particularly useful in demonstrating career-planning and workplace readiness skills.

Vignettes

The vignettes in chapter 4 present a number of scenarios that illustrate the interdisciplinary systems thinking approach. While they are presented in general grade-level categories, the scenarios can be adapted to other developmental levels through the creativity of the teacher/facilitator.

Best Practices

The best practices section in chapter 5 has been included to identify innovative and dynamic models. Contact information is provided so that educators are able to gather more information about practices that lead to high attainment of the standards.

Activities

To strengthen the linkages between the academic content areas and the Cross-Content Workplace Readiness Standards, thematic problem statements in chapter 6 have been designed to include interdisciplinary approaches to workplace readiness. Teachers may adopt, adapt or replace the activities presented here with ideas of their own.

Adaptations for Special Populations

Instructional adaptations for special populations are provided in chapter 7. Experts in the education of the specific populations provided the input for these adaptations.



Chapter 1

A Systems Approach to Cross-Content Workplace Readiness

Preface

According to Robert Reich, former U.S. Secretary of Labor in *The Work of Nations*, the current U.S. educational system is based on an industrial model of production and an eighteenth-century model of knowledge compartmentalized into discrete disciplines. This instills a mental model in students that the world is made up of discrete components, each capable of being understood in isolation. Most formal education perpetuates a fallacy of compartmentalizing systems, offering up facts and figures in bite-size units of social studies, language, mathematics, and science, as if each were distinct and unrelated to the others. To discover new opportunities, one must be capable of seeing the whole and understanding the processes by which parts of reality are linked together. Issues in the real world rarely emerge in a predefined, neatly separable way.

As society becomes more complex, traditional education becomes less relevant because of its fragmentary nature. A more effective and engaging approach to educating can be found in the combination of *integrated instruction* and *a systems approach*. The result is a highly motivating and engaging frame for learning. Such an approach encompasses experiential education, through which students learn by the following means: by doing, by helping to select and design projects, by researching possible solutions from a wide variety of resources, by presenting their work to outside review panels, and, finally, by evaluating their work on their own terms. Academic content is integrated into all of these activities so that students' education is structured to meet the requirements of the standards. The intent of this framework is to demonstrate a path to bring these ideas to fruition.



Systems and Systems Thinking: How Things Really Work

A **system** is an arrangement of interacting, interrelated, or interdependent parts, rules, and principles designed to be unified to work as a whole – for example, the solar system; a political system; a system of government; office systems; a method, plan, or process; a mechanized or electronic system. All the parts of the system are related to the same overall process, procedure, or structure, yet they are (most likely) different from one another and often perform completely different functions.

Systems thinking is defined as a way of thinking about, as well as a language for describing and understanding, the forces and interrelationships that shape the behavior of systems. Systems thinking helps us change systems more effectively, and act in tune with the larger processes of the natural and economic world. It articulates the interrelationships of the complex elements of real-life situations as they evolve over time.

Complex systems include all or some of the following characteristics:

- self-stabilizing
- goal-seeking
- program-following
- self-reprogramming
- environment-modifying
- self-replicating
- self-maintaining and repairing
- self-reorganizing
- self-programming

Complex systems often exhibit behaviors that include anticipating changes in the environment, inertia or initial resistance to change. Since education is a complex system, the framework presented here is a step forward in a journey that will take time.



Design: The Creativity of Work

Design is the fusion of imagination and action. It is defined by the following characteristics or attributes (International Technology Education Association, 2000):

- purposeful in intent
- based on certain functional, constraining, schedule, or cost requirements
- systematic in approach or processes used to accomplish the design
- creative
- many possible solutions

Design becomes a context for learning. It allows students to apply content-area concepts and skills. A design and problem-solving approach emphasizes students' active participation. They are asked to make deliberate choices, to think critically about problems, and then to act by designing and implementing potential solutions. These are transferable skills that support life-long learning and problem solving.

The actual thought processes used in design will vary from person to person and will differ with varying contexts. Therefore, a global design process cannot be modeled with complete accuracy. Any design process is merely a generic guide that assists students through the many phases of designing.

A simple design process includes the following steps: analysis, synthesis, and evaluation. Teachers will need to break down these steps according to the developmental levels of the learners. Opposite are the steps in models for elementary and high school levels.

Elementary Level:

- ▶ What is the problem?
- ▶ Think of some solutions (brainstorm).
- ▶ Select a possible solution.
- ▶ Implement and test the solution.

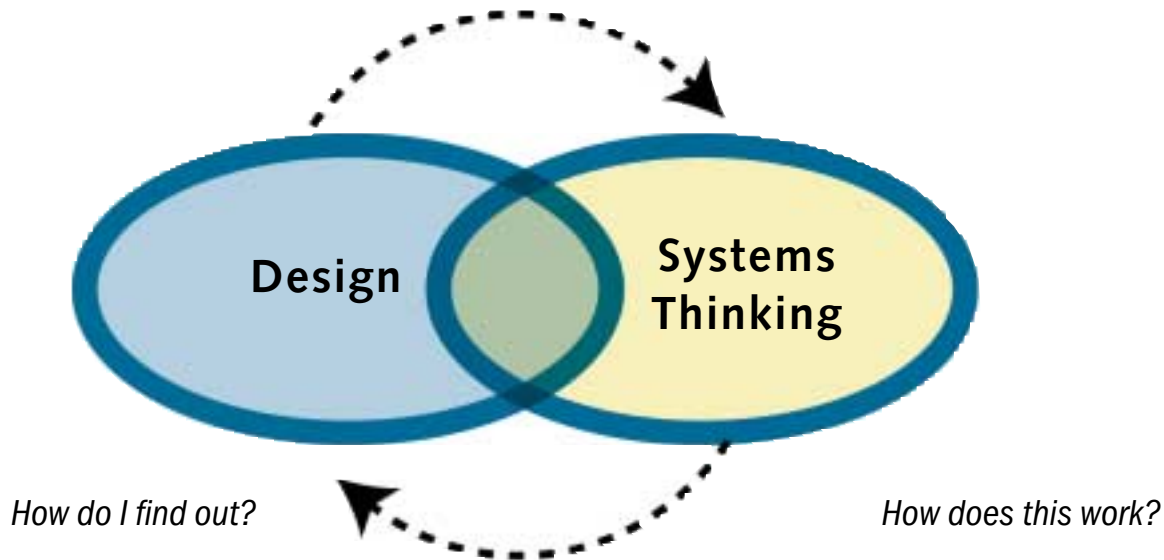
High School Level:

- ▶ Analyze and investigate a real-world situation.
- ▶ Frame a design brief.
- ▶ Gather information.
- ▶ Generate alternative solutions.
- ▶ Choose a solution.
- ▶ Conduct developmental work.
- ▶ Produce a prototype.
- ▶ Test and evaluate the prototype.
- ▶ Redesign and re-implement the solution.

One cannot design effectively without an understanding of systems and the application of systems thinking in the design process. Figure 1.1 shows the relationship between design and systems thinking.

Figure 1.1

DESIGN AND SYSTEMS THINKING



In other words, a systems thinking approach is the best way to present how things in the world really work in an interconnected, interdisciplinary way. Design is about what one does with this understanding for example, to devise courses of action that will replace existing things with better ones.

Curriculum Approaches

To help prepare students for a rapidly changing world, the State Board of Education adopted five workplace readiness standards to be integrated with the seven content areas. These standards define the skills that students need as they pursue college, careers, and adult responsibilities as citizens. The Cross-Content Workplace Readiness Standards include: 1) career planning and workplace



skills; 2) use of technology, information, and other tools; 3) critical thinking, decision making and problem solving; 4) self-management; and 5) safety principles.

Unlike the cumulative progress indicators for the other content areas, the workplace readiness indicators are not organized by grade-level clusters because, in addition to crossing all content areas, they also cross grade levels. Teachers and counselors should integrate these concepts into all programs in content-specific and developmentally appropriate ways. To strengthen the linkages between the content areas and cross-content workplace readiness, framework activities and scenarios include interdisciplinary and integrative approaches to workplace readiness.

H. Lynn Erickson makes the following observation about integrated curricula in *Stirring the Head, Heart, and Soul: Redefining Curriculum and Instruction*:

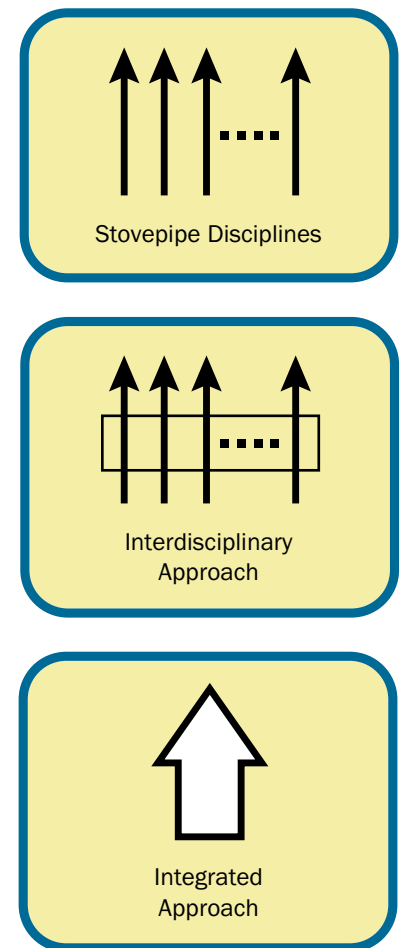
Curriculum integration is the organization of content under a common, abstract concept such as interdependence or conflict. The goal of integrated curricula is to illuminate more clearly the concept under study in relation to a significant theme, problem or issue, through the application of higher-level thought processes as students analyze, synthesize, and generalize from information to knowledge.

Teachers will find that there are many stages of instruction leading to the integrated approach. Teachers are asked to take steps to move the instructional classroom toward integrative levels. The systems thinking method will help students comprehend complex realities and design will help them improve them.

This framework is designed to illustrate a path for the integration of cross-content workplace readiness standards. It is also designed to be usable within the constraints of the existing educational structure.

Figure 1.2

ILLUSTRATION OF APPROACHES



A Model For Cross-Content Workplace Readiness

Knowledge is increasing at an exponential rate. This poses a dilemma for an educational system that uses a model of discrete disciplines and a finite amount of “teaching” time. The key question is how to impart ever increasing knowledge over this finite amount of time. One solution is to move from the traditional approach in which the teacher imparts knowledge to a new approach in which the teacher is in the role of facilitator of learning. Table 1.1 compares the characteristics of classrooms in these two scenarios as defined by Jacqueline and Martin G. Brooks in *The Search of Understanding: The Case for Constructivist Classrooms* (1993).

Table 1.1

COMPARISON OF TEACHER ROLES

Teacher Imparts Knowledge

- Curriculum is presented part to whole, with emphasis on basic skills
- Strict adherence to fixed curriculum is highly valued
- Curricular activities rely heavily on textbooks and workbooks
- Students are viewed as “blank slates” onto which information is etched by the teacher
- Teachers generally behave in a didactic manner disseminating information to students
- Teachers seek the correct answer to validate student learning
- Assessment of student learning is viewed as separate from teaching and occurs almost entirely through testing
- Students primarily work alone

Teacher Is a Facilitator of Learning

- Curriculum is presented whole to part with emphasis on big concepts
- Pursuit of student questions is highly valued
- Curricular activities rely heavily on primary sources of data and manipulative materials
- Students are viewed as thinkers with emerging theories about the world
- Teachers generally behave in an interactive manner, mediating the environment for students
- Teachers seek the students’ point of view in order to understand students’ present conceptions for use in subsequent lessons
- Assessment of student learning is interwoven with teaching and occurs through teacher observations of students at work and through student exhibitions and portfolios
- Students primarily work in groups

**Table 1.2****SUMMATIVE AND FORMATIVE ASSESSMENT****Summative**

- Educator-developed assessment
- Learning ends with assessment
- Assessment used for judging/tracking
- Assumes a “bell curve” model
- Uses “paper and pencil” tests
- Focus on recall/recognition

Formative

- Student-developed assessment
- Assessment guides future learning
- Assessment is used for feedback
- Criterion referenced
- Uses rubrics
- Iterative process
- Portfolio/Performance-oriented

The following project illustrates how the aspects discussed above can be applied in classrooms today.

Pyramid Reconstruction: A Systems Thinking Project

The Pyramid Project can be scaled as a content-area activity, an interdisciplinary activity, or an integrative activity. Students may work individually, collaboratively, or cooperatively, or they may use a variety of approaches appropriate to the project tasks.

The primary goal of the Pyramid Project is to engage students in grades K to 12 in activities that emphasize problem solving, critical thinking, systems thinking, and communication processes. The teacher and students work together to define the problem. Examples of problems include the following:

- How can a heavy object be moved up an inclined plane?
- What aspects of the system in existence at the time enabled the Great Pyramids of Egypt to be built? Which aspects of that system are still in existence today?
- Develop alternative methods of building the pyramids within specified constraints, for example, limited human, natural, and economic resources and realistic distances for moving large stones.

Background

The Great Pyramids at Giza, built more than 4500 years ago, continue to impress engineers and technologists. These tombs are the most famous of the pyramids, but there are more than eighty other pyramids in Egypt. The largest of the three, the Great Pyramid of King Khufu, was built about 2550 B.C. At its peak, it was 481 feet tall and had a square base 756 feet on each side. Approximately 2,300,000 blocks of solid limestone, each weighing about 2.5 tons, were used in its construction.

The pyramids, and the building of them, served a critical societal purpose in ancient Egypt. Many scholars have offered theories on how the Egyptians accomplished construction of the pyramids. However, there is no definitive proof to substantiate their conjectures.

The ancient Egyptians were faced with many problems while building the pyramids at Giza. One of the challenges they faced was to find a way to move the heavy blocks of stone into position to build the pyramid. The largest pyramid at Giza is more than 450 feet high and required more than two million stones.

Regarding the form of labor, the theory that has gained credibility was that the Great Pyramids of Giza were built by “free” labor, rather than by slave labor. Workers willingly gave their time with the expectation of a better afterlife for themselves, as well as for the pharaohs. Other pyramids in other dynasties were most certainly built by slave labor.

The Egyptians needed to be quality workers. Clearly, their finished project is evidence of their ability to work both individually and in teams. The Egyptians understood a great deal about technology and practical problem solving. They were critical thinkers who knew how to make decisions. There was division of labor among the ancient Egyptian workers. For example, there were surveyors, stonecutters, rope pullers, engineers, architects, and designers.

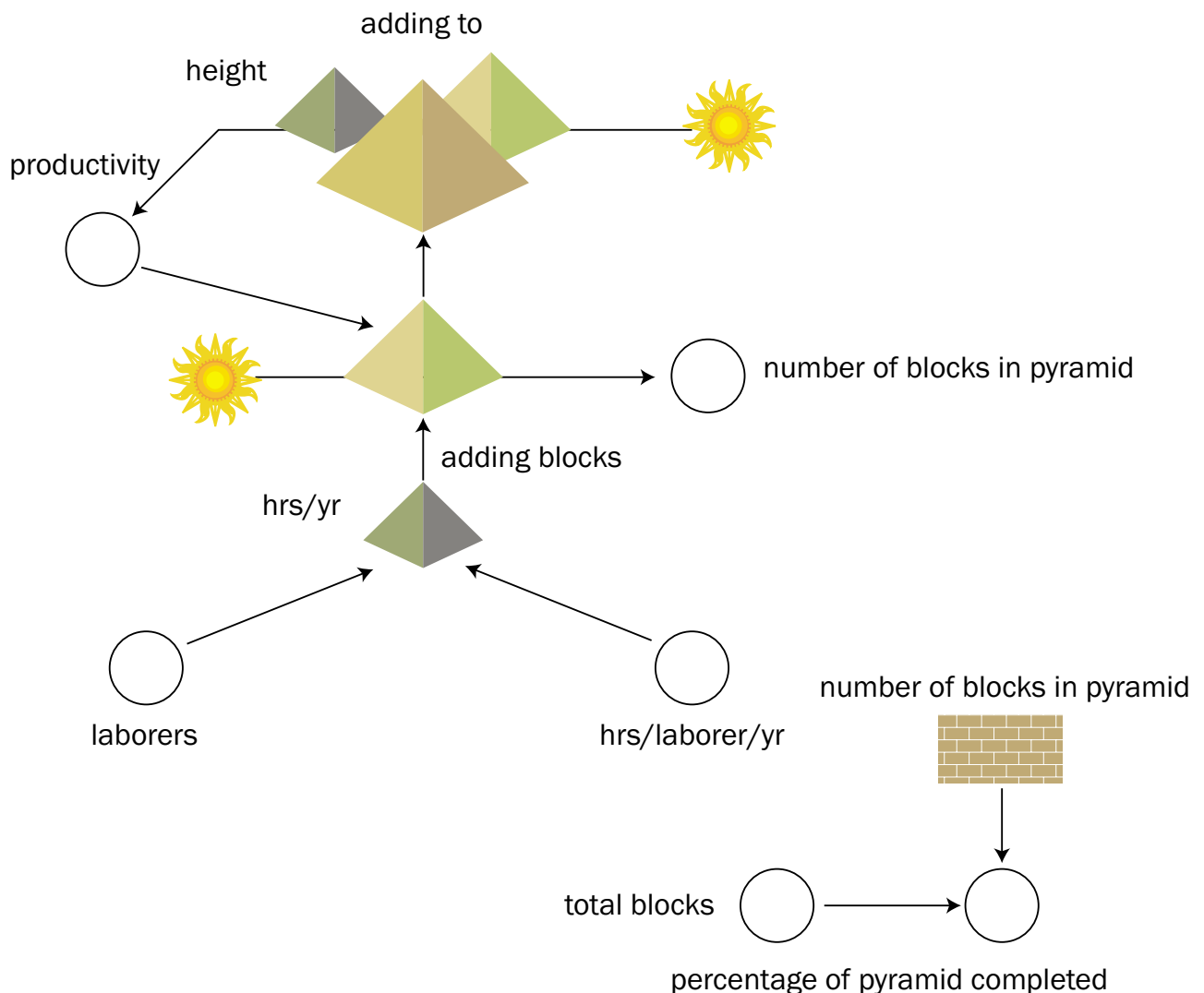
The ancient Egyptians worked on the pyramids only three months of the year, when the Nile River overflowed. The annual overflowing of the Nile was critical for enriching the soil along its bank to provide nutrients for growing crops to feed the population. This annual event set the clock and pace for life in ancient Egypt.



Simulation is a practical educational tool that helps clarify issues in a problem. A common simulation model is a stock-and-flow diagram which translates any situation into visual or quantitative terms. Figure 1.3 is the representation of a simple stock-and-flow model for the labor and material resources needed to build a pyramid. The rate at which the pyramid can be built depends on the number of laborers, labor productivity, and the number of stone blocks available. Students can see the results of varying these parameters, and they can use such a model to discuss the effects of different labor poli-

Figure 1.3

SIMULATION OF LABOR AND MATERIAL RESOURCES NEEDED TO BUILD A PYRAMID OVER A PERIOD OF TIME



cies on completion of the pyramid. One policy to be assessed could be the enlistment of a workforce of free labor highly motivated to see that the pharaohs' place in the afterlife is secured, thereby securing their own places in the afterlife. Another policy to be assessed could be the use of slave labor, perhaps not so highly motivated.

Table 1.3 summarizes some ways in which the Pyramid Project can be used as a content-area activity, an interdisciplinary activity, or an integrated activity.

Table 1.3

INTERDISCIPLINARY AND INTEGRATED APPROACHES FOR THE PYRAMID PROJECT

Content Area	Interdisciplinary	Integrated
<ul style="list-style-type: none"> The problem is to size the amount of labor and the time needed to build the Great Pyramid at Giza, assuming that work is performed for only three months each year. Contrast the problem with the amount of labor and time needed to build the Great Pyramid using the processes, tools, and technologies available in modern-day America. 	<ul style="list-style-type: none"> Build on the content-area problem for the amount of labor and time needed to build the Great Pyramid at Giza: develop a plan to recruit workers; plan a diet for the workers and estimate how much food would be required to meet their needs. Build on the content-area contrast with modern America: propose a plan to recruit workers; estimate how much food would be required; estimate how much energy would be needed to operate tools. 	<ul style="list-style-type: none"> Build on the interdisciplinary problem by proposing an alternative “year-round worker” scenario and the impact of this alternative on the growing of food. Build on the interdisciplinary problem by contrasting the effort with the number of workers in the construction industry and farming in modern-day America; project the employment trends of the two groups.

Source: Adapted from Derek Hitchins in a 1995 presentation on “Systems Engineering the Pyramids.”



Chapter 2

Project-Based Learning

Learning Process

Project-based learning enhances the learning process. Students and teachers work through a series of ideas that help the students make decisions about their own learning. The learner needs to be aided in understanding self as the curriculum/lesson relates to 1) applying self as a learner to the situation, 2) framing questions, 3) tackling a project, 4) working as part of a team, 5) monitoring individual programs, 6) selecting a career, and 7) developing his/her skills and knowledge in order to be successful in a career choice.

Teachers should encourage each student to document his or her growth through a series of reflections at the conclusion of each stage of the project experience. Depending upon his or her approach to learning, a student may want to keep a video diary, a computer-assisted log, an audio library, a pictorial portfolio, or a record of artifacts.

As students begin an activity, they may engage in the following steps:

- form learning or work teams (cooperative groups);
- develop a mission for each team;
- develop a contract for the group;
- list the tasks to be completed;
- identify the leaders within the learning community;
- develop and implement team reporting procedures;
- coordinate the efforts of each team.



Implementing Project-Based Learning

As teachers implement project-based learning, they may engage in the following steps:



Define your goal: What do you want to achieve?

1 Keep in mind that the project will be student-centered and hands-on and will focus on active learning and the retention of knowledge. Determine which learning standards will be taught.

Build Support: Who can help achieve the goal?

2 Where appropriate, obtain the support of the administrative staff, other teachers, parents, business and industry, and the community.

Research: Is this a real-life problem?

3 Engage in interviews, reading and discussions. Be prepared to record observations at employment sites, follow established code and laws, as well as establish health and safety requirements, and address transportation and travel needs as appropriate for the project.



Determine whether students will work independently or in a group.

4 How many students will be included in the group? How will groups be selected and assessed?

Make a plan: What should be done next?

- 5**
- List objectives that address the skills that all students need to develop.
 - Create timelines including total project duration and the amount of time to be devoted to the project each week.
 - Organize the project.
 - Which learning standards are addressed?
 - Where do students start?
 - What information or experiences do students need before beginning the project?
 - What materials will be needed?
 - How will students obtain the materials?
 - Is the project timeline realistic given the students' other assignments?
 - What will students learn from this project? What is different about this project compared with other projects?
 - What knowledge and which skills cross disciplines?
 - What will happen if the project isn't successful?
 - How will students be assessed? What checkpoints are needed? How will the final project be evaluated? By what group of people will the project be evaluated?
 - Determine if the project appears to be of interest and if it is engaging and skill rich. Adjust if necessary.
 - Delegate responsibilities and assume a mentoring role.
 - Foresee problems and develop solutions.
 - Troubleshoot the project.
 - Create samples to determine if realistic.
 - Accept delays and use them to determine what can be done differently.
 - Make modifications.

The Benefits of Project-Based Learning

1. Project-based learning allows teachers and students to focus on in-depth central issues.
 - Content is presented authentically
 - Students deal with content in a relevant and interesting way
2. Students learn to search for answers and solve problems
 - Activities are challenging and constructive
 - Activities adapt to individual learners
3. Students are empowered
 - Project-based learning conditions encourage social, personal and collaborative skills
 - Project-based learning encourages use of technological tools

The Teacher's Role

During the project-based learning process, the teacher begins by playing the role of mentor. The teacher explains the project and then steps back and relinquishes control, acting as an observer. In this role, the teacher needs to feel comfortable with some degree of “creative chaos.” The teacher provides the time and the materials needed for conducting the project. In addition, the teacher helps students prepare for participation in the project. Students must learn to identify problems, think through the problem-solving process, meet expectations for social behavior, dress appropriately for the activity; use time appropriately, and show respect for others.

Throughout the project, the teacher provides opportunities for students to reflect on what they have done. Students may keep a journal, perform a group self-evaluation, or answer a set of questions.

Evaluating Project-Based Learning

Assessment instruments might include, but are not limited to the following:

- open-ended rubrics
- observation surveys
- peer rating scales
- self-evaluations
- teacher evaluation checklists and rubrics

High-quality project-based learning results in attainment of goals and objectives in the following areas:

- academic content
- cross-content workplace readiness skills
- occupationally specific skills
- skills for life-long learning

The project-based learning process also requires the following: demonstration of teamwork among participants, reflection on activities, and the design and implementation of portfolio materials.



Table 2.1

TRADITIONAL AND PROJECT-BASED INSTRUCTION COMPARISON

Criteria	Traditional Instruction	Project Based
Content	<ul style="list-style-type: none"> • Knowledge of facts 	<ul style="list-style-type: none"> • Comprehension of concepts and principles
Scope and Sequence	<ul style="list-style-type: none"> • Follows fixed curriculum • Move from unit to unit • Narrow, content area focus 	<ul style="list-style-type: none"> • Follows student interests • Large units composed of complex problems or issues • Broad, interdisciplinary focus
Teacher's Role	<ul style="list-style-type: none"> • Lecturer and director of instruction • Expert 	<ul style="list-style-type: none"> • Resource provider • Advisory/mentor
Assessment	<ul style="list-style-type: none"> • Products • Test scores • Reproduction of information 	<ul style="list-style-type: none"> • Process and product • Tangible accomplishments • Demonstration of understanding
Classroom materials	<ul style="list-style-type: none"> • Texts, lectures and presentations • Teacher/book company - developed worksheets and activities 	<ul style="list-style-type: none"> • Direct or original sources, printed materials, interviews, and documents • Data and materials developed by students
Use of technology	<ul style="list-style-type: none"> • Ancillary, peripheral • Administered by teachers 	<ul style="list-style-type: none"> • Central, integral • Directed by students
Type of student involvement	<ul style="list-style-type: none"> • Students working alone • Students competing with one another • Students receiving information 	<ul style="list-style-type: none"> • Students working in groups • Students collaborating • Students constructing, contributing, and synthesizing information
Student role	<ul style="list-style-type: none"> • Carry out instructions • Memorize and repeat facts • Listen, behave, speak only when spoken to 	<ul style="list-style-type: none"> • Carry out self-directed experiences • Discover, integrate, and present ideas • Communicate, show affect, produce, take responsibility
Goals	<ul style="list-style-type: none"> • Knowledge of facts, terms, and content • Mastery of isolated skills • Breadth of knowledge • Graduates who have knowledge to perform on standardized achievement tests 	<ul style="list-style-type: none"> • Understanding and application of complex ideas and processes • Mastery of integrated skills • Depth of knowledge • Graduates who have the disposition and skills to engage in sustained, autonomous, lifelong learning

Professional Development

To ensure that students will achieve mastery of the Cross-Content Workplace Readiness Standards and indicators, district staff need to integrate these standards into their curricula. Professional development activities focused on incorporating the standards into the curriculum and instruction are key ingredients in that process. The definitions, descriptions, explanations, vignettes and sample activities provided in this document will facilitate district staff development and conversations regarding infusion and integration of Cross-Content Workplace Readiness Standards. The following procedures may be helpful in encouraging staff to work cooperatively and to participate in professional development activities.

- Engage district staff in professional dialogue concerning the integration of the workplace readiness standards into their curriculum activities.
- Review sample activities and vignettes to understand the depth and scope of specific indicators and ways to integrate specific cross-content workplace readiness skills into classroom lessons and units of instruction.
- Identify lessons, projects, and activities included in existing curricula that are modeled after the sample vignettes and activities.
- Group staff by grade level, grade cluster and/or subject area. Use staff development time to meet, design, and revise interdisciplinary projects, units and/or lessons on an ongoing basis.
- Enlist the help of any teacher-trainers in the district to provide assistance and support to their colleagues in the implementation of the district-designed curriculum projects, units, and lessons which integrate cross-content workplace readiness skills.
- Incorporate these projects and units into written district curriculum as examples of cross-content workplace readiness integration.



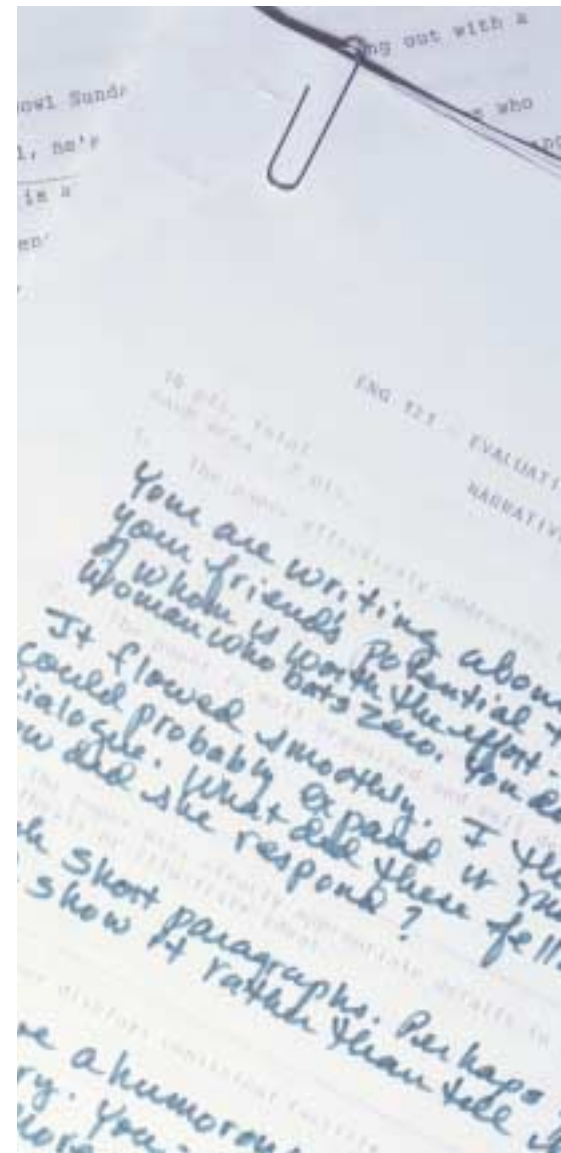
Chapter 3

Portfolios

The New Jersey Department of Education defines portfolios as collections of samples of students' work that show progress and achievements in one or more areas over a period of time. Samples for the portfolio may be chosen by the student alone or by the student and the teacher together. Typically, the student includes a written reflection for each sample that explains why the sample was selected. Portfolios may be cumulative and follow the student from grade to grade. Portfolio assessment tools may include among other things collections of student work samples, work folders, and assessment folders.

Portfolios provide a documented, cumulative record of student achievement. Portfolios are particularly useful in demonstrating career-planning and workplace readiness skills. They also provide a strategy for assessing the student's critical-thinking, decision-making, problem-solving and self-management skills. Portfolios can enhance the learning process by offering students the opportunity to evaluate their own work and to create a "collection of work" that best represents the student's growth and development over time. This chapter provides information on the purpose, structure, assessment, and reliability of career-development and project-specific portfolios and explains how teachers and counselors can use portfolios as a tool in the implementation of Cross-Content Workplace Readiness Standards.

Traditional paper-and-pencil tests or selected-response tests that contain multiple-choice, matching, or true-false questions allow students to choose a correct answer from among a limited choice of responses. These traditional kinds of assessment are used extensively in large-scale testing programs and enjoy a long history of psychometric theory and test-development practice. According to Brian M. Stecher et al. in *Using Alternative Assessments in Vocational Education* (1977), portfolios provide an alternative form of assessment that gives students the opportunity to choose or to construct



their own responses from a much wider universe of possibilities (Stecher et al., 31). Portfolios and other alternative forms of assessment also provide evidence of a student's critical-thinking and self-management skills that are sometimes difficult to measure using traditional forms of assessment. On the other hand, portfolios are designed to demonstrate a broader range of student work and to contain a variety of components (e.g., student reflection, peer evaluations, and oral presentations).

A portfolio is a collection of work that demonstrates a student's knowledge, skills, and understanding. There is no standardized format. Portfolios may contain a variety of components, such as the following:

- writing samples or reports
- official records (e.g., transcripts, certificates, or grades)
- personal student reflections (e.g., a letter of introduction, a student log, or a journal)

Portfolios may also contain career-development materials including the following:

- resumes
- completed job applications
- letters of recommendation from teachers and employers
- samples of work products

Whether intended for career development or focused on specific projects, portfolios can be designed to present a student's best work or to show how a student's work has evolved over time. Portfolios can also be a comprehensive compilation of a student's work in a given area, for example, a career-development portfolio that spans a student's high school years.

Purpose

The National Center for Research in Vocational Education (NCRVE), in *Getting to Work: A Guide for Better Schools*, suggests that portfolios can be used for a variety of purposes in the classroom:

- To document career development and exploration over time: Students have the opportunity to reflect on their progress in setting goals and making choices.
- To demonstrate the attainment of skills: A student's portfolio can be submitted to a potential employer or to a school if the student is applying for further education and training.



- To improve curriculum: The use of a portfolio can provide a structure and an organizing tool for projects that are sequenced over time. Portfolios give teachers an alternative strategy for evaluating a broader range of student skills and abilities. Through portfolios, teachers can observe student performance over time.

Structure

Portfolios can be structured around a wide range of components that demonstrate student work, reflection, and teacher and peer evaluation. A teacher's decision about the components to be included in students' portfolios should be based on the following questions:

- Which standards does the teacher want to assess through the portfolios?
- For whom will the portfolio be useful?

Mikala Rahn and Gary Hoachlander, in module 4 of *Getting to Work: A Guide for Better Schools* (1995), suggest the following guidelines for selecting portfolio components:

- The components should be connected to the overall purpose of the portfolio.
- Standards and scoring guidelines should be defined for each component and each component should be scored or graded separately.
- Evaluating the overall portfolio is optional. Teachers may decide to grade the portfolio at the end of the year or invite a panel of teachers or employers as outside evaluators.
- Portfolios should be exhibited or housed in a single file or location so that the portfolio can be readily accessible and understood by someone outside the process.
- Students must be aware of the purpose of the overall portfolio and understand the instructions and expectations for each component.

Teachers should select required and optional components of the portfolio according to the guidelines described above.

Components of both project-specific and career-development portfolios can be categorized as follows: academic skills and knowledge, personal development, career development, and exhibits of student work. Table 3.1 shows a small sample of components that fall into each category.

Table 3.1

EXAMPLES OF PORTFOLIO COMPONENTS

Academic Skills and Knowledge

- Research project
- Samples of written work
- Transcripts
- Test scores

Career Development

- Resumé
- Cover letter
- Job application
- References

Personal Development

- Journals
- Logs
- Self-reflection
- Peer reflection

Exhibits of Work

- Artwork
- Oral presentation
- Video
- Display or exhibit

Assessment of Components

The NCRVE recommends that each component be evaluated using a three-step process. If the teacher chooses to evaluate the entire portfolio, a similar three-step process should be used.

- Determine the primary learner outcomes for the component chosen.
- Determine the method of review (e.g., teacher, peer, employer, panel of reviewers).
- Determine the scale for assessing student performance (e.g., a point system, grades A through F, or a weighted scale).

Guiding Questions for Educators in the Use of Portfolios

The following questions were adapted from the Southern Regional Education Board Site Development Guide #10, *Advancing Students' Academic and Technical Achievement by Improving Classroom Assessment*. (See page 160 in the guide.)

- What is the reason for using a portfolio in my classroom? What skills and knowledge do I want students to be able to demonstrate?
- How much time will students be given to develop their portfolios (e.g., a semester, a school year, more than one school year)?
- Will the overall grade for the portfolio be used in more than one course? Are portfolio components assigned from different courses (e.g., English and social studies)?
- What components will be required? Will there be optional components?
- Who will select the work samples to be included in the portfolio?
- What are the consequences of failing to complete the portfolio?
- Will the portfolio document existing work completed for a course or will it include new activities developed specifically for the portfolio?
- Who will evaluate each component? Will students have another chance to complete or pass each component if they do not complete or pass it the first time?
- In what ways will the portfolio be used?



Chapter 4

Vignettes

The following scenarios illustrate the interdisciplinary, systems-thinking, and project-based approach. Although they are presented in elementary, middle, and high school categories, the scenarios can be adapted to other developmental levels through the creativity of the teacher/facilitator.

Elementary School Level

M.A.G.I.C. — Interacting with the Aged

If children do not have the opportunity to become close to their grandparents or other adults, they may develop stereotyped images of the elderly, and, in turn, the elderly may develop stereotyped images of youth. MAGIC (Many Ages—Giving, Interacting, Communicating) brings younger and older people together to share time, concerns, and life experiences. Students in grades three, four, and five visit nursing homes on a regular basis to interact with the elderly. They prepare for their visits with a presentation by the 4-H organization entitled “Walking in my Shoes.” Students and nursing home residents participate in arts-and-crafts, musical, and game activities. Upon returning to school, students process the experience with the school counselor, and concerns, joys, and feelings of sadness are shared with each other. Nursing home residents look forward to subsequent visits from their “adopted” grandchildren.

Preparation for this project begins in September with the presentation of “Walking in My Shoes.” Nursing home visits begin in October with each visit lasting approximately an hour and a half. Some students are apprehensive about their first nursing home visit and what will be encountered. Discussions about expectations and role-playing activities help students prepare for the experience. Visits by different grade levels continue throughout the school year. Students help plan and implement the events. Students from high school occupational programs may be asked to help younger students prepare for the visits.





An interdisciplinary approach is used. Students create arts-and-crafts gifts to be presented to the elderly during their visual arts class. Musical performances, instrumental and choral, are rehearsed during music classes. Students calculate the cost of the items used to create the arts-and-crafts gift items and develop budgets to get the best value for their dollar. Thank you letters and pen-pal letters are written to nursing home residents, especially when personal relationships are developed through multiple visits. Children learn about experiences, occupations, and recreation from bygone days and compare and contrast these with their own present day experiences.

Students are exposed to various health occupation careers while visiting the nursing home. The exposure may help them identify a career interest. During in-class discussions of what to expect at the nursing home, problems are defined, decisions are made regarding appropriate behavior, and students identify patterns of behavior in elderly people. Positive and negative experiences are shared and possible solutions for future visits are determined. Children work cooperatively with classmates and adults and describe actions that demonstrate respect for the aged. Safety precautions are discussed and practiced to avoid transportation accidents and unsafe situations during nursing home visits.

Students develop a sense of pride and accomplishment in helping and interacting with members of their community. Students also learn the value of service learning and how it promotes their academic achievement in various subjects. Students prepare a written summary of their experience and its positive or negative impact on them.

Community involvement is also emphasized in the project. Local profit and nonprofit businesses donate materials and expertise. For example, the local flower shop donates flowers for the children to create arrangements for the nursing home. Students receive recognition through local newspaper photographs that appear throughout the school year. Students publish information about MAGIC and the nursing home visits in school newsletters that are sent home throughout the school year.

Adapted from MAGIC, developed by Angela Belmont, Service Learning Coordinator, NJ Learn and Serve America.



Young Consumer Program

Imagine your excitement at being 10 years old with the responsibility of spending \$100 on a family grocery order for a week. This is the culminating activity of the Young Consumer program. Fourth-grade students shop in pairs, use calculators, make shopping decisions, weigh products, and read store maps. During the event, students are supervised by parents.

On shopping day, students arrive at the store wearing a Young Consumer T-shirt. A parent is assigned to each pair of students. Some parents volunteer to run the problem-solving stations. Students have 90 minutes to complete their tasks, including checking out. Students can earn up to 1000 points for the following: problem solving, purchasing nutritious food, spending close to their allotted \$100, adhering to safety standards, and demonstrating map and communication skills.

The Young Consumer program focuses on a partnership of school administrators, fourth-grade students, and the students' teacher and parents. In addition, a community supermarket becomes an extension of the classroom. As the program is implemented, a facilitator from the Kelloggs Foundation, working through the Middle Atlantic States Consortium (MAC), guides the partners in fulfilling their respective roles. The school administration approves the Young Consumer concept and provides transportation on the day of the event. The community partner hosts the event and provides information about the food industry and the supermarket for the teacher to infuse in lesson plans. The community partner also attends the parent training session. The teacher develops the lesson plans, organizes the parent training session (parent night), and works with the community partner to set a date for the event. The parents attend the parent night session which prepares them to supervise the students on the event day.

See also the "Promoting Industry Awareness" Best Practice.





Middle School Level

The Real Game

The Real Game, a copyrighted program by Bill Barry and Susan Wright licensed to The Real Game Inc., is a hands-on, practical, experiential learning program that allows students to experience various aspects of the working world through role playing and game devices. The program is cross-curricular and designed for middle and junior high school classes (primarily seventh and eighth grades) of up to 40 students. (Additional versions, designed for students from grade three through adult, are also available.) Through a series of interdisciplinary exercises and events guided by teachers or counselors, students become more aware of the world of work and how their actions in school affect their futures. Anecdotal records from New Jersey teachers indicate that student interest in academics increases as they begin to see the relevance of their studies to life.

Unit One: Learning a Living

In the first unit, Learning a Living, the students are given an overview of the Real Game. The game is presented as a journey in career exploration that will bring the students to “assume the mantle of the expert.” The students are informed that they will, through a randomly chosen occupation, explore elements of adult life. To assess current knowledge of terminology and other elements related to the work world, students complete a questionnaire which they fill out again at the end of unit five to evaluate their progress. The students play the first round of the Spin Game which is an interdisciplinary, multiple-choice question-and-answer game and form groups which serve as the basis of many subsequent activities for the Real Game program.

Unit Two: Making a Living

In the second unit, Making a Living, the students take on their roles. Four activities help them to gradually imagine themselves as adult workers.

First, the students explore and express their dreams by choosing items on the “wish list” that they would like to have in their adult life. Reality comes into play when students have to balance their





monthly budgets by applying their mathematical skills and assess what they can actually obtain, taking income and chance, represented by Chance Cards, into consideration. The students personalize their activity poster as they gather information on their neighbors' occupations. Elements on the activity poster include transferable skills, annual holidays, gross and net monthly income, income tax, bills, and expenses.

Unit Three: Quality of Life

In unit three, Quality of Life, the students choose leisure and holiday activities, taking into account the profile assigned to them. They examine their necessary daily activities and then choose activities for their free time. The students plan a group holiday, taking into account their budget and the amount of vacation time allotted to each member. This is an exercise in negotiation. Students research specific destinations and a variety of occupations in the travel industry.

Unit Four: Changes and Choices

The five activities in Changes and Choices help students become aware of unexpected elements that occur in the work world and in life. Unforeseen circumstances change the course of the game as students must offer support and assistance to colleagues who are faced with a job loss. Activities, such as group discussions and essays, help students think of positive actions that may bring new possibilities. Finally, the entire class is rendered jobless by large-scale disasters. The students work as a team, offer solutions, and learn how their transferable skills will enable them to grasp other opportunities.

The students then play the second round of the Spin Game so that they may continue to explore occupations, terminology, and the links that exist between their schooling and the work world.

Unit Five: The Personal Journey

The Real Game ends with unit five, The Personal Journey. The students imagine themselves in the future and must reflect on their career journey by talking with individuals in the community. Guest speakers are invited to a career day. These activities enable the students to share their experiences and new knowledge and to gather information on the present work world and a variety of careers.



High School Level

The Corporation Learning Way

The Corporation Learning Way (CLW), developed and copyrighted by John O'Hara, a teacher at Kearny High School, is a pedagogy that incorporates workplace readiness into the core curriculum. Corporation Physics is a high school physics course that uses the Corporation Learning pedagogy. Other disciplines using the Corporation Learning Way include, but are not limited to, English, earth science and social studies.



Using the Corporation Learning Way, students are empowered to take responsibility and leadership roles. Students are taught how to work in teams. They learn to use technology in making presentations. They learn how to stand in front of an audience to deliver a lesson without typical teenage jargon. CLW is a student-centered process that gives students the workplace readiness skills that they will need to enter the workforce of the 21st century upon completing their formal education. It is a process that teaches students how to be life-long learners and provides them with entry-level tools that are essential in business, for example, using technology to communicate ideas and time-management skills.

CLW is a process that is modeled after successful business practices, including teamwork, critical thinking and problem solving, self-management, responsibility, and empowerment. In addition to learning the traditional 3 R's of reading, writing, and arithmetic, students learn the 3 R's of the 21st-century: rigor, responsibility, and relevance.

In Corporation Learning Way, the classroom becomes a corporation, the students become the employees or associates of the firm, and the teacher becomes the CEO. Students write a resumé and a cover letter to apply for a specific team. They list their unique qualifications for the team and provide an alternate team choice. In this manner, students are discouraged from joining their friends' teams, and they can avoid peer pressure to do so by citing their qualifications and background.



Procedures

Imagine a science class with a 14-period, two-week schedule. In a traditional class, the instructor might lecture for five periods during the week and have a double-period lab. In CLW, the instructor presents for the first four periods. The fifth period is a planning period. From period 6 through 12, the students are presenting.

The core curriculum content material is taught at a rigorous, rapid pace by the instructor. After the teacher's presentation, which is an introduction to the material, specialized teams embellish it. Because physics has many components, such as theory, mathematics, laboratory investigations, and use of technology, students apply to be on teams that focus on these areas. They are taught how to prepare a cover letter and a resumé and identify their qualifications for a particular team. Each team is responsible for presenting a specific component of physics to the class approximately once every two weeks. These groups, known as the Quality Team, the Quantity Team, the Lab Team and the WITS (Web, Information, Technology and Speakers Bureau) Team, are a few of the teams used in Corporation Physics.

While students make use of the Internet for research and gathering real-time data, they are not allowed to simply read their notes. They must prepare a computer presentation (e.g., Microsoft® PowerPoint), and they may refer to their notes on a large-screen television connected to the computer. A rubric is used to grade each presentation.

Each team must make an electronic presentation. They must distribute notes of their slides to each student in class. They must also make up a worksheet or some other class activity. The presenting team will grade the activity and record the grades. With seven teams presenting, this provides seven rigorous homework assignments in a two-week period. Students must also publish a company newsletter, design and publish a web page, and be ambassadors for the Corporation Learning process by giving lectures and presentations to the community and school districts.

Three Blind Mice

Three Blind Mice, a program developed at River Dell Regional High School, integrates technological design with language arts literacy and many other areas of the curriculum. Students in grades 9-12 are challenged with the problem of designing and building a mousetrap to successfully capture a live mouse or mice without killing or harming them in any way. The teacher or students select an independent or collaborative approach. First, students gather information about mice to learn their habits, physical attributes, and unique features, electronically and through their library sources. They are given specific design criteria. Although mousetraps are often made of simple materials like cardboard, oaktag and tape, and wood and plastic, students frequently show ingenuity in suggesting unusual materials.

Throughout this technological design process, an English teacher, acting as a language consultant, introduces the students to various selections of poetry and short fiction that involve mice. In some instances, the authors and poets use mice as metaphors which initiates meaningful philosophical discussion. Students analyze and interpret the literary works and express and formulate their own opinions. They make powerful connections between the symbolism and ideas that lie within the poetry and their own real-life situations.

The project culminates on test day. Five live mice arrive on the scene and are placed on a specially constructed barricaded tabletop, along with the student- designed mousetraps. When the mice are released, they scurry for the corners as the students cheer for them to come toward their traps. The students begin to whisper to one another: “My trap is on the wrong side of the table. Uh, oh, I should have designed the ramp differently and placed the door on the other side! Next time...” One scenario might be as one bold mouse cautiously mounts the bread-crumbs-covered ramp, all eyes focus on his movements. The creature continues to creep, sniffing and nibbling his way to the top of the ramp, where a Cheese Combo awaits on top of a trapdoor. The mouse moves forward and stands on the trapdoor.





The students stare attentively, astonished that the mouse does not fall, as the feast continues. Then, in one split second, the mouse dashes down the ramp and onto the safety of the table. “The trap door didn’t release,” moan the owners, already considering how they can improve the design. This culminating test continues all period as many mice escape, making the few that are captured a true prize. Although the period ends, no one wants to leave even to eat lunch.

In Three Blind Mice, students are given the opportunity to solve a genuine problem, starting with research and culminating in thoughtful assessment and revision. This provides experience in brainstorming, planning, designing, making, testing, and evaluating an original product as part of a technological design process. The creative use of language through poetry and fiction allows students to analyze, experience, and apply language to meaningful situations; express formulated opinions; and gain an appreciation and understanding of the power of language. As problems in design construction develop, students interact freely with each other, using critical thinking and discussion skills as they help solve each emergent problem. As a final language arts exercise, the students create and present their own poems or short stories about mice. In producing an original solution to a genuine problem, students find new meaning in the old saying, “Build a better mousetrap and the world will beat a path to your door.”

Adapted from River Dell Regional High School.

Structured Learning Experience

A 17-year old senior wants to be given the opportunity to work for pay in a local business as part of the school curriculum. The student knows of a position that is open at a local deli. The school personnel begin to assist the student.

They identify the student's interest areas for employment based on academic preparation, past job-shadowing experiences, past employment experiences, and volunteer experiences. A review of the student's portfolio and a reassessment of previous activities help determine the career focus and determine whether the local deli position is a viable option. If the student's career interest area is not working in food service, the student should be directed to an employment opportunity more closely related to his/her long-term educational and employment interests.

The cooperative education teacher contacts potential employers for the student or the student obtains a promise of employment and notifies the teacher. The teacher inspects the site, if the district has not yet done so. The teacher assists the student with the employment application process, including interviews and paperwork. Once a promise of employment has been obtained, any student/youth under the age of 18 must obtain an employment certificate, commonly called working papers. The student's proposed hours and days of work must be identified on the employment certificate, along with the student's job title and job description. The school principal signs the employment certificate, certifying the age of the student and verifying that the hours of work will not impair the student's school performance or disrupt the student's class schedule. In addition, the district must ensure that the student's work schedule does not violate state or federal child labor laws. The student, parent/guardian, and a physician, who verifies that the student is physically fit for employment, also sign the employment certificate. Once the employment certificate is completed, the student's work site is then registered on the New Jersey Department of Education's electronic work site registration system as required by the Administrative Code for Standards and Assessment for Student Achievement. (Visit the following web site to view the document: <http://www.state.nj.us/njded/adopted/standards/index.html>).





School personnel work with the student to develop the formal structured learning contract. The contract specifies the progressively higher-order skills to be achieved by the learner. The agreement is signed by the student, the parent/guardian, and school personnel. See the following web site for a sample agreement: <http://www.stw.ed.gov/Database/Subject2.cfm?RECNO=562>.

General health and safety instruction is necessary for each student. The student receives safety and health training related to the specific position at the work site. The cooperative education teacher maintains written documentation that this student is proficient.

Documentation of insurance is also kept with the student's records. In addition, if a student uses his or her own motor vehicle for transportation to the work site, a copy of his/her motor vehicle insurance should be maintained on file.

The cooperative education teacher provides ongoing support and documents supervision of the learner at the work site for a minimum of 30 minutes every two weeks. The teacher consults the workplace mentor on a regular basis about student conduct and attendance, development of specific occupational skills, and development of general workplace skills. The school teacher/mentor is ultimately responsible for keeping records and ensuring that a grade is issued for credit by the school. The teacher/school needs to verify the number of hours (starting date and completion date) worked and the attainment of the skills identified as part of the learning agreement.

Food Industry Internship Program

Using the Cornell Distance Education Program (DEP), students can participate in the food industry intern program on Monday, Wednesday and Friday afternoons from 1:00 to 4:00 p.m. The intern completes the work-experience portion of the program at his/her sponsoring retail store. On Tuesday and Thursday afternoons they participate in food-industry-related coursework at their high school. The intern's in-store work experience is scheduled to coincide with the coursework. For example, interns taking the Grocery Management and Operations course, a component of the program, should spend their in-store time working in the grocery department.

The intern meets with the in-store supervisor to decide on the number of additional hours per week, making sure that it doesn't exceed state regulations and does not affect academic performance.

The intern performs the jobs the sponsoring company assigns her/him to do as permitted by law for minors. The intern is involved in a management responsibility each week. This training activity helps the intern gain an understanding of management goal-setting and how each job responsibility, if done well, contributes to the success of the total retail operation. Some of these responsibilities include:

- weekly scheduling,
- planning and ordering displays,
- ordering and shelf stocking,
- determining shrink and how it can be reduced.





Chapter 5

Best Practices

Routes to Success: Some Examples That Work



Strategy: Paid Structured Learning

Partner: TECH 2000/Verizon (formerly Bell Atlantic New Jersey)

TECH 2000 is a school-based telecommunications training program for high school juniors and seniors, postsecondary students, and adults returning to school. The program's goal is to create a telecommunications-literate workforce and a school-to-career transition for New Jersey's telecommunications industry. The partnership started as PROJECT SMART at Ocean County Vocational School in 1993. It has been expanded to additional sites in cooperation with the International Brotherhood of Electrical Workers (IBEW) and vocational schools throughout the state. More than 400 students are enrolled in the two-year program, and there are several new sites in the planning stage. To date, a large percentage of students are employed in industry. The program was selected by the U.S. Department of Education as one of the ten best school-to-career programs in the nation in 1996, and it has also received a number of state and local awards. The Mercer County Workforce Investment Board is working to replicate the program for the growing hospitality industry in the state's capital region.

For more information, contact:
Educational Relations – External Affairs
Verizon New Jersey
(973) 649-5011

Strategy: Serving Students with Disabilities**Partner: Atlantic County Special Services School District (ACSSSD)**

In partnership with local gaming businesses, ACSSSD provides a comprehensive training program for disabled students. After initial preparation in ACSSSD's school-based component, students have an opportunity to progress into the work-based component, which offers structured learning experiences in various departments. ACSSSD conducts a supervised rotational program that exposes students to the types of positions available in the gaming industry. A full-time teacher is placed at each site to provide support to students and the work-site mentor. Students prepare for work at the casinos by first working at a local nursing home, hospital, or community college under the close supervision of the teacher and employee mentors. The mentors teach work skills, as well as industry culture and norms. As students become more independent and confident, master skills, and develop good work habits, they advance to the next level of training at one of three participating casino/hotel properties in Atlantic City. Students work every day and learn job-specific skills, improve work habits, and develop social skills that are necessary for success in entry-level positions in business and industry. Students either are hired into permanent positions after they participate in training at the work sites, or they find employment elsewhere with the help of the teacher and the service agencies that work with the school.

For more information, contact:
School-to-Career Project Coordinator
Atlantic County Special Services School District
(609) 625-5663

**Strategy: Apprenticeship****Partner: International Brotherhood of Carpenters and Joiners**

The International Brotherhood of Carpenters and Joiners provided a secondary-level carpentry curriculum to area vocational schools and high schools that offer carpentry programs. The curriculum materials provided by the brotherhood include major tasks and competencies, lists of hand tools and equipment, and health and safety information, all of which can be used alone or in conjunction with the established curriculum. Materials were presented in both floppy disk and CD-ROM formats. Reference materials pertaining to the history of labor-management relations were identified. The unions provided training to classroom teachers of carpentry in the use of the materials. Districts that employ the curriculum materials will ensure that students who successfully complete the program will be competitive in meeting the entrance requirements of the New Jersey unions affiliated with the International Brotherhood of Carpenters and Joiners.



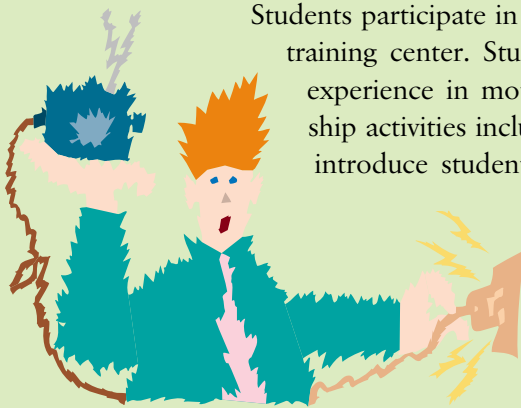
For more information, contact:
Apprenticeship Coordinator
New Jersey Department of Education
(609) 984-5906

Strategy: Apprenticeship

Partner: International Brotherhood of Electrical Workers, LU 351, New Jersey

International Brotherhood of Electrical Workers (IBEW) provides technical assistance to partnering vocational-technical schools to align their electrical curriculum with the IBEW's entrance requirements for apprenticeship. In some instances, districts have implemented the IBEW National Apprenticeship and Training Committee's math book. In others, the IBEW has reviewed the district curriculum to ensure that it includes the math requirements. The IBEW has conducted mock employment interviews for participating students.

Students participate in lab activities at the IBEW's apprenticeship and training center. Students use programmable controllers and gain experience in motor control and basic circuitry. Other partnership activities include outreach to two alternative high schools to introduce students to careers in the electrical trades. Students who successfully complete the IBEW's Youth Transitions to Work (YTTW) program are eligible to apply for the local union's electrical apprenticeship program.



For more information, contact:
Apprenticeship Coordinator
New Jersey Department of Education
(609) 984-5906

**Strategy: Career Pathway****Partner: Jersey Shore Hospital**

The Monmouth County Vocational School District's medical and health curriculum offers students real-life experiences. In the freshman year, students are introduced to various health careers and volunteer positions through guest speakers and trips to local healthcare facilities, e.g., a local cerebral palsy school or a senior center. In the sophomore year, students participate in a six-week rotation program at a local hospital. Learners are assigned to assist staff and get a firsthand glimpse at the workings of a hospital. In the junior year, students research a specific need in the community and create a plan for addressing the need. All of the students write a grant proposal for their plan. The best proposals are chosen and students collectively work toward implementing the plan in their communities. In the past, a group of students cleaned up and rebuilt a playground at a local child-care center, and another group created a video that informs middle school students about the dangers of drinking and driving. The students' experiences culminate in the senior year when all students participate in an internship program with a local business or healthcare facility. The internships are diverse and have included placements with pediatricians, primary care physicians, hospitals, substance-abuse centers, county human services departments, nutritionists, and a health program for a cable television network.



Students have the opportunity to gain college credit before graduating from high school through a joint program with a university. Character education has been incorporated into the health curriculum, and students study ethics and practice ethical decision making.

Internship performance and job preparation skills are evaluated through a career portfolio and mentor feedback.

For more information, contact:
Monmouth County Vocational School District
(732) 775-0058

Strategy: Career Pathway**Partner: Varies**

As early as seventh grade, students and their parents are invited to attend a Career Magnet Fair that highlights district programs from each high school. Upon acceptance into a Career Academy, students are expected to perform at a high academic level and compete for participation in industry training programs, summer internships, and senior year youth apprenticeships. By their junior year of high school, successful students are placed in training programs provided by industry partners. Here they are expected to put their classroom skills into practice in the workplace and also bring back to the classroom the confidence and expertise they have gained from their on-site work assignments. This continues with a summer internship and a senior year youth apprenticeship. Upon completion of all program requirements, students take an industry proficiency test. These are developed by national organizations and approved by the state.

For more information, contact:
School-to-Career Project Director
Jersey City Public Schools
(201) 915-6225

Strategy: Industry Training**Partner: Merrill Lynch**

Merrill Lynch provides a comprehensive work-based learning program to Jersey City public schools. Tenth-grade students in the business and marketing magnet program participate in an industry-specific career day with the employer. In the eleventh grade, the students participate in a half-day training program that acquaints students with all aspects of the industry. The employer provides a summer internship for high school seniors that prepares students to successfully obtain employment with Merrill Lynch or to compete in the marketplace.

For more information, contact:
School-to-Career Project Director
Jersey City Public Schools
(201) 915-6225

**Strategy: Service Learning/Structured Learning Experience****Partner: Varies**

The Pupil Assisted Learning Service (PALS) program is a community-based service learning program that enables students to make a difference by helping others. Tenth-, eleventh-, and twelfth-grade students spend one or two periods of the school day performing service work at one of a variety of sites, which may include large and small businesses, colleges, hospitals, elementary schools, day-care centers, government agencies, theaters, and nursing homes. Students are not paid for their service work, but they receive credit for their participation. PALS teachers work with the students and community sponsors and serve as a link between the school and the community. They match student interests with sponsor needs, counsel students, visit sites, and evaluate learning experiences and students' progress.

For more information, contact:

Lakewood Coordinator
(732) 905-3581

Strategy: Entrepreneurial Activities**Partner: NA**

Students and teachers learn a great deal about the world of work by operating the entrepreneurial businesses within their schools. By developing, making, and distributing a product, students gain experience in the many aspects of running a successful business. Eight entrepreneurial programs are operating at four high schools, one vocational-technical school, one middle school, one elementary school, and one special-needs school. Examples of the products distributed include furniture, buttons, gift baskets, crafts and wreaths, popcorn, and embroidered and/or screen-printed activewear. The students are responsible for all aspects of their business, including marketing, advertising, production, accounting, sales, and inventory. Each program is monitored in February, the midway point, and again in June at the end of the program. All profits from the businesses are reinvested into the business funds.

For more information, contact:

Tech-Prep Project Director
Union County College
(908) 965-2999

Strategy: Promoting Industry Awareness

Partners: Wakefern Corporation, Kellogg Foundation, and ShopRite Supermarkets

The Young Consumers Program is based on the belief that learning is everyone's business and that it extends beyond the classroom. During the 1998-1999 school year, two fourth-grade pilot programs were successfully completed at Lopatcong School in Warren County and Penn Beach School in Salem County. The pilot has been expanded to train fourth-grade teachers in Salem and Bergen Counties. The program activities include classroom preparation, family orientation, a compulsory shopping activity, minds-in-motion challenges and communication exercises. In a key program component, students, working in pairs, plan meals and purchase food in a local supermarket to feed a family of four for a week within a fixed budget. Partnerships with community businesses facilitate program activities and field experiences. The pilot programs were sponsored by ShopRite Supermarkets, Progressive Publishing and Mid-Atlantic Consortium (MAC) of Colleges.

For more information, see also the Young Consumer Program vignette or contact:

Ramapo College
Learning Resource Center
(201) 684-7886





Strategy: School-Based Enterprise/ Structured Learning Experience

Partner: Little Egg Harbor Bagel Cart

The Bagel Express School-Based Entrepreneurial Project helps students develop basic business skills. One hundred students from twenty-six middle, junior high, and secondary schools in Atlantic, Cape May, and Cumberland Counties participate in the program. Each location features a custom-made entrepreneurial cart, equipment, inventory, information, and materials to initiate and operate a stand-alone, portable, school-based retail business. Students and staff use computers donated by corporations to access The National Grocers Association Front End Associate Skills and Competency list or the Bagel Express Booklet and Skills checklist. The materials are used to train and certify workers in the retail food industry. Student workers are fully engaged in the learning process and attain many of the identified New Jersey Core Curriculum Content Standards as they serve school-based customers in a true-to-life learning environment. The student participants record entries from daily sales, count money, perform customer service tasks, inventory stock, plan merchandising and marketing activities and complete bank deposits. The profits are reinvested in each enterprise in the form of U.S. savings bonds, stipends, new equipment, class trips, and community-service projects.



For more information, contact:
Eagle Enterprises
Egg Harbor Twp. High School
(609) 653-8804

**Strategy: School-Based Enterprise/
Structured Learning Experience****Partner: NA**

Several school-based enterprises operate as part of the ATTAIN (Advocating the Teaching of Transition According to Individual Needs) program. Students participate in transitional academic classes and career classes, several of which operate the student enterprises. One class operates a Bagel Express business, which provides students with the opportunity to practice, in a realistic setting, content areas presented in the classroom, e.g., banking, money transactions, bookkeeping, and interpersonal skills. The building-trades class operates a Sheds-R-Us business in which students construct and sell storage sheds and other woodcrafts. The students use equipment, materials, and procedures used at actual construction sites. Development of appropriate work behaviors and attitudes and job-specific skills takes place in this environment. The manufacturing-career class makes and sells contracted items to small businesses or individuals, including boardwalk pieces, novelty candles, seasonal cards, and professional signs. The food-service class operates Snack Attack. Students learn and practice appropriate communication, math, and money-handling skills while preparing and selling special hot food items. The life-skills class operates a produce stand. Students take orders; sort, weigh, bag, and deliver produce; price orders; and collect payments. Students practice customer-service skills and money-handling skills including the use of a cash register. Another group of students produces and sells holiday cards. Students participate in the design and production of the cards, as well as packaging, sales, and distribution. All of the school-based enterprises enable students to have hands-on, realistic vocational experiences. Profits are used to cover the costs of each enterprise and for student activities or individual student compensation.

For more information, contact:
Atlantic County Special Services School District
(609) 625-5663

**Strategy: School-Based Learning/ Microsociety****Partner: NA**

The Microsociety approach to education uses the school setting to help students develop an understanding of institutions, markets, and jobs. This approach offers students the opportunity to increase their academic knowledge by practicing skills and exploring a variety of career interests. Students are paid “school money” for good attendance, behavior, and work performance. With their accrued money, students can purchase items at regularly scheduled in-school “Mall Days” during which student-made items and donated gifts are sold. In addition to Mall Day purchases, students can buy items from the school store and tickets to special school events on a daily basis. Students also learn to pace their spending and to save for important events.

For more information, contact:
Clifton Avenue Grade School
Lakewood School District
(732) 905-3650

Strategy: Mentoring**Partner: Washington Township Chamber of Commerce**

The Washington Township Chamber of Commerce has spearheaded a mentoring program designed to help high school students clarify their career goals through interaction with business leaders. Each student is paired with an employee mentor who helps the student learn specific skills and knowledge. The programs at Washington Township High School and Glassboro High School call for high school juniors and seniors to intern at various Chamber of Commerce employer sites. Internship positions are available in retail businesses, banks, restaurants, health service organizations, local government agencies, and other organizations. The students gain an understanding of the knowledge, competencies, attitudes, and daily activities required to perform the duties of the occupations they choose to pursue.

For more information, contact:
Washington Township High School
Sewell, NJ
(609) 589-8500, ext. 7036

**Strategy: Integrating School-Based Learning
and Structured Learning****Partner: NA**

The Abraham Clark High School Health Occupations program is an academic program for students who have significant interest in pursuing careers in the health field. The program offers three sequential courses. The first course, Health Careers, is an introduction to various techniques, medical terminology, and professions associated with the health-care industry. The course is offered to sophomores and juniors at Abraham Clark High School and in another school district through distance learning (ITV). The second course, Health Occupations, introduces juniors and seniors to the health-care environment while supplementing further classroom instruction with clinical hands-on experience. Students work for two hours each day at an acute health-care facility or a long-term health-care facility. Students shadow a health-care professional and learn about the world of work. The final course, Health Occupations Co-op, is offered to senior students who successfully complete the prerequisite courses, maintain excellent attendance, and demonstrate good citizenship. Co-op students work in a health-related facility and receive compensation for their work.

For more information, contact:
Abraham Clark High School
Roselle, NJ
(908) 298-3367

Strategy: Peer Mentoring**Partner: NA**

The Morristown High School's peer mentoring program trains high school students to be mentors. The program provides opportunities for students to make a difference in a child's or a troubled teenager's life. To participate in the program, a student must first complete the United Way of Morris County's twelve-hour Mentor Training program. The United Way program focuses on the roles, rights, and responsibilities of the mentor. Graduates of the program receive a certificate of completion.

For more information, contact:
Morristown High School
(973) 292-4803

**Strategy: Guidance and Counseling****Partner: NA**

All ninth-grade students meet three times a week in a classroom setting with their guidance counselor. The course covers the following topics: self-esteem; communication; coping with peer pressure; getting along with others; stress and conflict; understanding needs, wants, values, and goals; interest inventories; aptitude inventories; job leads and classified ads; job applications; job interviews; Internet sites and career and college information; vocational guidance; maintaining a career portfolio; current events in the world of work;

steps in decision-making; required job skills; responding to constructive criticism; team-building; and work ethics.

The various methods of instruction used include group activities, video presentations, research projects, administration of interest and career inventories, application of the Bridges software program, and maintenance of a career portfolio.



Three specific measures are available to document the program success. All ninth-grade students successfully complete the following program components using the Bridges career exploration program: a values inventory, a skills inventory, an interest inventory, an investigation of suggested careers; requests for career materials; and analysis of career information. A career folder is completed by each student. This folder is updated and revised throughout the student's high school experience. An assessment instrument is administered.

For more information, contact:
High Point Regional High School
Sussex, NJ
(973) 875-8103

Strategy: Guidance and Counseling

Partner: NA

The Individual Career and Academic Plan (ICAP) is an important tool that increases a student's knowledge of the various careers that exist in today's marketplace and his or her awareness of the importance of career planning. This folder follows the student's progress in career development from kindergarten to grade six. Younger students are asked to think about the careers that are of interest to them, and they are encouraged to learn about a variety of careers.

The ICAP folder includes a record of each site visited, the date of the visit, and the activities that occurred at the job site. The student is also given a place to record personal impressions and thoughts about what was heard and seen. Another section of the ICAP folder provides space for the student to keep a record of the careers for which he or she has completed shadowing activities. The final section of the ICAP folder allows students to keep a record of the guest speakers they meet and their impressions of the speaker and the speaker's occupation.



For more information, contact:
STC Project Coordinator
Glassboro Public Schools
(856) 881-6366, ext. 318

**Strategy: Job Shadowing****Partner: Varies**

A job-shadowing program conducted on February 2, 2000 offered 600 students the opportunity to gain career awareness and explore occupations. In the medical field, students were able to gain firsthand experience in X-ray, radiology, dental, nursing, dietary, emergency, respiratory, EKG, and purchasing departments. One student was able to shadow the chief executive officer of a company that provides counseling services. Students interested in the sciences were able to observe lab technicians, engineers, and others working in the field. Other students spent time with researchers experimenting with new methods to grow crops and with the supermarkets where the mature food was being offered to consumers. At the supermarkets, the students were able to shadow baggers, sandwich makers, stock clerks, pharmacy assistants, and store managers. Students interested in law enforcement spent the day with members of the court system and with state and local police officers. A district-wide eighth grade class spent the day with its community administrators, police force, and maintenance department. The county political system allowed fourteen students (one student from each school district) to shadow the county freeholders. The students were made honorary freeholders and they participated in an actual freeholder meeting. The students spent most of the day with county employees. Before the freeholder meeting, the students and freeholders worked together to prepare for the students' evening presentation.

Field trips conducted throughout the year for students in grades K-12 help introduce a variety of careers. At school, students have access to career magazines, The Real Game activity, and Internet resources.

For further information, contact:

Project Director
Pennsville School District
(856) 540-6203

Strategy: Working with Organized Labor**Partner: Local 54**

A teacher and up to eight students with disabilities work at each hotel/casino site. Each student is paired with a nondisabled employee mentor in training positions throughout the hotel, for example, dining-area attendant, line server, wardrobe attendant, environmental services worker, casino scheduling clerk, and administrative services clerk. The partnerships between ACSSSD and the casino/hotel properties and Local 54 have enabled ACSSSD to create “classrooms without walls” within the community, where students can participate in experiential learning and obtain training in a real work environment. The teachers and mentors help students learn specific job skills, appropriate work behaviors, and industry culture and norms. Students are evaluated on a monthly basis using a work-skill evaluation form that was developed in collaboration with the hotel/casino and Local 54. Each student also has a work-site agreement that specifies the roles and responsibilities of the student, parent, teacher, school principal, and employer.

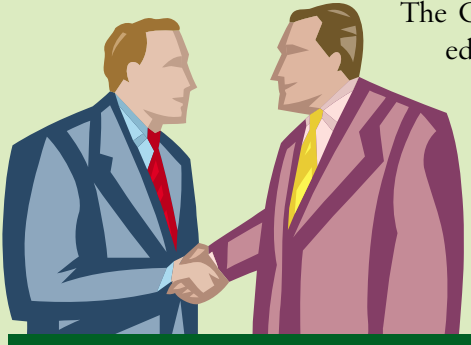
For more information, contact:
Atlantic County Special Services School District
(609) 625-5663

**Strategy: Classroom at an Industry Site****Partner: Sheraton Hotel**

The Monmouth County Vocational School District's educational collaboration with Pacific Concord Management-Sheraton Hotel resulted in the establishment the Culinary Training Program, an exemplary structured learning experience. Collaboration is evidenced by joint training experiences. School instructors train employers at the work site and employers reciprocate by training instructors as they train their own employees. Hotel partners also invite instructors to attend corporate training sessions or conferences, keeping teaching staff current with industry technologies and skills. Students are trained through a variety of structured learning experiences to evaluate hospitality skills and interests. During shadowing activities, junior and senior high school students visit the hotel and its restaurants to explore hospitality careers. The high school students also receive culinary training provided by hotel mentors. Simulation and application activities using academic skills are included to help students solve daily problems. A seamless student transition from secondary program to college placement is facilitated through the articulation of eight college courses (18.5 credits) with the local and regional colleges.

For more information, contact:
Monmouth County Vocational School District
(732) 431-7943



Strategy: Involvement with a Local Chamber of Commerce**Partner: Cherry Hill Regional Chamber of Commerce**

The Cherry Hill Regional Chamber of Commerce created the Career Awareness Program to help students increase understanding of careers through a combination of hands-on experiences, structured visitations, and lectures. The program has three main components as follows: job shadowing, business expos (business tours), and speakers in the classroom. The program components are chaired and implemented by members of the committee, which include the staff of the Cherry Hill Regional Chamber of Commerce, representatives from twelve participating high schools, and executives and management staff from the business community. By the end of the 1999-2000 school year, twenty-two business expos and sixteen allied health expos were held, and 100 students were placed in shadowing experiences. In all, more than 1,200 students were involved in the program. The Cherry Hill program is evidence of the success that can be achieved when the public sector, businesses and schools collaborate.

For more information, contact:
Cherry Hill Regional Chamber of Commerce
c/o (609) 989-7888

**Strategy: Involvement with Junior Achievement****Partner: Junior Achievement**

Junior Achievement offers several classroom-related instructional units that allow students to apply classroom experiences to work-related projects. Units involve economics, Success Skills 2000, Workplace Internships, Success Now, Company Program, Leadership JA and GLOBE. Economics is a one-semester course in which students learn the fundamental concepts of micro-, macro-, and international economics that are applied in active and engaging ways. Success Skills 2000 helps students acquire competencies and skills necessary for the modern workplace by learning interpersonal skills and problem-solving strategies. Workplace Internships offer students the opportunity to apply job-related skills and develop characteristics for the modern workplace. Success Now engages students in a variety of activities designed to help them develop personal skills appropriate for the workplace and to guide them in their career search. Company Program teaches students how to organize and operate a business enterprise that can be part of a school course or used with school clubs and organizations. Leadership JA helps students become active community leaders by studying about and working in the local economy. GLOBE brings together students from two different nations to form an import/export company that actually engages in international trade.

For more information, contact:
President
Junior Achievement of South Jersey, Inc.
(609) 222-1090



Strategy: Community Connection with Scouts**Partner: Girl Scouts of America or Boy Scouts of America**

The school district examines the badge categories for different levels of scouts obtained from a scout leader. After comparing the badges available to the types of programs offered in the district, possible modified programs that might be offered for the scouts can be listed. Narrative descriptions are written that include the event number, date and time, location, age/level, fee (which is usually zero), and registration information. An example of a narrative might be that this program will cover topics designed to introduce you to computer applications, including: computer use in classrooms; commonly used software programs; popular computer games; and reviewing computer magazines for content. If time permits, the information is included in the county scout calendar. By completing the course along with other student-initiated procedures, the student meets the requirements for the badge.

For more information, contact:
Camden County Vocational School District
(856) 767-7000, ext. 5420

**Strategy: Out-of-School Youth****Partner: New Jersey Youth Corps**

New Jersey Youth Corps has been serving out-of-school youth in NJ since 1985. It is a comprehensive program that ties together several major elements that include counseling, basic skills, community service work, and job placement. Youth Corps enrollees participate full-time by spending one-half day in academic instruction and one-half day in community service work. Community service jobs provide controlled, supervised work situations where corps members can develop maturity skills that are essential for a good prospective employee. Jobs have included such varied activities as building renovations, landscaping, public parks beautification, day care assistance for senior citizens and children, and work in community theatre.



For more information, contact:

NJ Human Services
(609) 588-3898

Professional Development Programs

The Academic-Business Connections Conference

Academic-Business Connections (ABC) is a three-day conference for teachers, counselors, and administrators that encourages partnerships with members of the business community. The conference fosters the creation of innovative and meaningful ways to develop curricula that meet the needs of students in support of their postsecondary goals. The conference facilitates the process through both discussion and practical experience. Educators have the opportunity to learn more about the skills New Jersey employers require. Employers serve as hosts for the event and conduct workshops and business tours to stimulate critical thinking by attendees. Internships with some of the business sponsors are also offered at a later point as an option for selected participants.

For more information, contact:

Marketing and Public Relations Director
NJ Department of Education
(609) 292-7336

New Jersey Department of Labor Teacher Internship Program

For three years, the New Jersey Department of Labor has provided the leadership for a six-week School-to-Career/Employment Service (STC/ES) internship project for selected New Jersey educators. Classroom teachers and guidance counselors attend STC/ES orientation sessions in central-state locations and then spend the remainder of their internship learning about the services provided by local ES office personnel and by sister agencies, such as Vocational Rehabilitation, Unemployment Insurance and JTPA. Interns also complete a minimum of three job-shadowing experiences at local business/organizations and the interns meet with the leadership of their local Workforce Investment Board and STC consortium grantee. The participants develop lesson plans based on the teacher's summer experiences and the Core Curriculum Content Standards for the state.

For more information, contact:

New Jersey Department of Labor
(609) 292-3809



Business in Partnerships

Businesses are important resources in forming partnerships. Major employers often have a specialized human resources staff who can attend partnership meetings and develop and administer student placements. The urgency of running a business, however, also tends to make firms more isolated from the school system, less connected with other companies, and less aware of school initiatives.

The following strategies can help increase business involvement.

Personal Networks. Teachers, administrators, and parents have personal networks within the business community that practitioners can use to help involve businesses. Cultivating these connections builds a sense of community and encourages a culture of participation. To create this kind of network requires thinking of business involvement as a long-term partnership, one that builds trust and fosters relationships based on mutual respect and benefit. Although building upon personal connections is important when recruiting businesses, other approaches also lead to success.

Employment Specialists. A number of local school systems use employment specialists under a variety of job titles to develop partnerships with employers. Schools have found them particularly effective in recruiting businesses. Experience suggests that an employment specialist, acting as an intermediary between school and employer, can develop an understanding of the special needs and concerns of businesses. By devoting time and resources specifically to recruiting employers, employment specialists build relationships with businesses that might otherwise have been overlooked.

Intermediary Organization. The term “intermediary organization” encompasses a wide range of national, state, and local entities with links to employers, which can be called upon to facilitate the development of partnerships. Some businesses do not have internal structures or systems, such as training departments, to initiate and develop partnerships. Intermediary organizations can help fill this role.



Local intermediary organizations can relieve administrative pressures that often limit business involvement, such as coordinating the details of student assignments, providing payroll and benefit services, and providing information on liability issues. In some instances, they are the “employer of record” for participating students. Local intermediary organizations can also enhance the efficiency of an employer recruitment strategy, providing a single channel of communication and access to large number of businesses. An efficient and coordinated strategy ensures that employers do not receive multiple calls from staff members within the same school system – a situation that can create a burden for potential business partners.

Robert Kemmery, principal of Eastern Technical High School in Baltimore County, Maryland, suggests the following strategies for educators looking for business partners:

- Know your school’s strengths and the businesses’ strengths.
- Draft a business plan.
- Don’t start out asking for money.
- Work as equals.
- Use 20 minutes to make the pitch.



Chapter 6

Activities

Strengthening the linkages between the academic content areas and the Cross-Content Workplace Readiness Standards, the following activities illustrate **interdisciplinary** approaches to workplace readiness. The interdisciplinary approach combines several academic content disciplines and workplace readiness in a single lesson or activity that provides the opportunity for students to see the relationships that exist among the disciplines. In addition, the use of a systems approach allows educators to develop an overview perspective, producing a highly motivating and engaging framework for learning. These approaches will result in students who are informed, skilled, productive, confident, lifelong learners and citizens of the twenty-first century.

This chapter provides *sample* activities that flow from a suggested problem statement. The activities are designed to meet the standards and indicators. Teachers may adopt, or adapt the activities or replace them with ideas of their own.

The activities were developed around a problem statement that empowers students to use cooperative learning to arrive at solutions. Links to other standards are included to suggest connections or relationships to other content areas. The problem spirals through the curriculum from grades K-12. The focus statement uses language that is appropriate to the developmental level of learners. Integrated learning develops skills that are salable, marketable, and of realistic value in the workplace. The number of activities selected will be determined by an interdisciplinary team of teachers as they coordinate student cooperative-learning team research and implementation over project timelines. Different problems may be selected at different grade levels to avoid duplication.





Sections A through D, preparation, action, reflection/evaluation, and extension, are included for each problem statement. Many of the items under section A, preparation, are generic to most or all problem statements, so these have been listed separately beginning on page 3. The teacher may engage in the preparation activities as deemed appropriate. Section B lists the actions (including teacher tips) for the learner. These were arranged to flow in a logical order for reading but are not necessarily sequential. Reflection and evaluation activities, suggested in section C, are designed to allow the learners to contemplate what has been learned and to monitor their progress. The extensions in section D provide ideas for exploring corollaries and tangents.

Also included is a matrix of Cross-Content Workplace Readiness Standards showing related indicators for the activities. The list is illustrative and should not be considered definitive. Implementation will vary across districts and classrooms. (Note that for standard 3, indicator number 15 implies the inclusion of one through fourteen.)

In organizing the student projects, support and approvals may need to be obtained from administrative staff, building maintenance staff, and community and business leaders for activities involving speakers, field trips (transportation), and use of community facilities. The use of thematic problems can be integrated in accordance with district-approved curricula. Critical keys to successful implementation are planning, administrative and community support, and positive public relations outreach.



ACTIVITIES

A. Preparation: The teacher may engage in the following or additional activities as appropriate.

- ▶ Select and adapt/adopt the selected activities as deemed appropriate for the developmental level of the students.
- ▶ Enrich students' background knowledge and understanding of the topics and issues.
- ▶ Collaborate with other teachers and educational specialists to enhance the learner's experience.
- ▶ Investigate school-board policies and state code requirements.
- ▶ Secure appropriate administrator approval where necessary.
- ▶ Incorporate safety principles into the use of all equipment, materials, and movement for all activities.
- ▶ Prepare lessons around career pathways:
 - Arts and Humanities
 - Health and Human Services
 - Mathematics, Science, and Technology
 - Business and Information
- ▶ Incorporate current labor-market information on the availability of job opportunities in career pathways.
- ▶ Collaborate with the library media specialist and other educational specialists as appropriate to identify, secure, and integrate resources (print, non-print, electronic, and people resources).
- ▶ Contact community or business leaders for information and materials related to the problem statement.
- ▶ Work with the library media specialist to develop a related bibliography.
- ▶ Incorporate selected resources and works of literature related to each problem to develop skills and interest.
- ▶ Investigate software applications designed to assist students in developing and using computer models to understand and explore the problem.
- ▶ Develop and maintain a list of speakers and potential sites for field trip and/or community connections.

K-4

Statement A:

The local landfills are full. Propose a solution which encompasses local government, local citizens and local businesses.

Focus: Investigate recycling and waste management in the local community and develop an action plan to improve the situation.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.3, 4.5, 4.7; Science 5.1, 5.2, 5.4, 5.5, 5.8, 5.12; Social Studies 6.1, 6.4, 6.9; World Languages 7.1

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Listen to a presentation on local recycling efforts and regulations. ▶ Compare recycling and waste management. ▶ List related jobs and duties performed. ▶ Discuss working conditions and personal qualifications. 	1, 7		8, 9, 10	3, 6	1, 6, 7, 8
<ul style="list-style-type: none"> ▶ Read or listen to stories about garbage collection and recycling. ▶ Draw vehicles/containers used for recycling and include a motto for the safe disposal of materials. ▶ Develop the motto in the language of people in the community. 	1	1	2, 8, 15	6	1, 2, 6, 7
<ul style="list-style-type: none"> ▶ Explore the reasons for recycling. Draw conclusions about its impact on the community and the environment. 		1, 3, 8	10	6, 8	
<ul style="list-style-type: none"> ▶ Research the different sources of garbage in the neighborhood; i.e. stores, schools, restaurants, homes, construction sites, factories, etc. and determine how much garbage each source generates. <p>Teacher Tip: <i>Grades K-2 can actually collect pictures of the kinds of garbage by each source, grades 3-4 can make lists.</i></p>		5, 6, 7	1, 3, 4, 5, 7	10	



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Categorize garbage by types and determine how much of each type. Research the amount of time for each type of garbage to decay. Recycle appropriate items into a real or virtual recycling bin, sorting the items into the recycling categories per community regulations. <p>Teacher Tip: <i>Gather materials for students to categorize by community standards. Gather examples of items that use recycled materials. To control safety issues, it is recommended that the teacher select items to be sorted instead of students bringing items to school.</i></p>		5, 6, 7	4, 7, 9	2	1, 4, 6, 7, 8
<ul style="list-style-type: none"> ▶ Brainstorm alternative uses of recyclable materials. ▶ Discuss health and safety issues related to handling and disposing of recycled materials and waste. Discuss industry use of recyclables. 	5			9	1, 4, 6, 7, 8, 9
<ul style="list-style-type: none"> ▶ Plan and implement a community service project related to recycling, e.g., collecting previously owned clothing or furniture to be donated to needy families and businesses, participating in adopt a street/highway program. 	1, 2, 8		1, 4, 8, 13	2, 6, 7, 9, 11	3, 4, 7
<ul style="list-style-type: none"> ▶ Create a multimedia presentation for the local government demonstrating how the group's ideas will solve one garbage issue. Include a proposal for encouraging recycling. 	1	2, 3, 8, 9	1, 4, 8, 10, 14, 15	2, 6, 7, 11	7
<ul style="list-style-type: none"> ▶ Compare and contrast different forms of packaging. ▶ Determine the form that creates the least waste and seems to be the safest. 		1, 2, 3, 6, 7, 8, 10			1, 6, 8, 9
<ul style="list-style-type: none"> ▶ Read labels from packaged goods and discuss the incidence of recycled materials used in packaging. ▶ Check for use of recycling symbols. 	12				
<ul style="list-style-type: none"> ▶ Create a design using recycled materials. ▶ Critique the designs. 		1, 10, 15	3, 5, 11	5, 7	

Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Monitor disposal of items by the student during one school day.
 - ▶ Calculate the volume of materials and determine shapes and arrangements to minimize space.
-
- ▶ Survey the home system of disposal and recommend improvements.
 - ▶ Develop a plan to present to an adult in the home system to improve the situation.
- Teacher Tip:** *Encourage students not to touch materials but to perform the task by visual inspection.*

D. Extension

- ▶ Coordinate the school activities for Earth Day or a schoolwide “Recycle Day.”
-
- ▶ Create a musical instrument using materials from the home or school, e.g., straws, oatmeal boxes, cardboard tubes.
-
- ▶ Design and implement an actual system to be used all year to minimize school waste and to creatively dispose of other items.
 - ▶ Construct actual receptacles for waste.

1	2	3	4	5
		7, 8, 9, 12, 13	4, 9	7
		1, 2, 7, 10, 11 13		1, 6, 7
		1, 2, 7 10, 11, 13		1, 6, 7
5		1, 6, 10, 15	3	1, 4
1, 2	1, 2, 7 8	2, 4, 8, 10, 15	2, 3, 9	2, 3, 4 5, 7, 8



5-8

Statement A:

The local landfills are full. Propose a solution which encompasses local government, local citizens and local businesses.

Focus: Develop an action plan for the community.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.4; Comprehensive Health and Physical Education 2.1, 2.2, 2.4; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.5, 4.12; Science 5.1, 5.2, 5.3, 5.4, 5.6, 5.7, 5.10, 5.12; Social Studies 6.1, 6.4, 6.9; World Languages 7.1

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> Find an article or printed resources related to recycling and bring to class. Report on individual articles and discuss problems and alternative solutions. 		3, 5, 6	4, 5	10	
<ul style="list-style-type: none"> Research the effects of toxic waste on humans and the environment. <p>Teacher Tip: <i>Examine the effects of toxic substances on growth and human development.</i></p>		3, 5, 6, 10	4, 5	10	6, 7, 8
<ul style="list-style-type: none"> Plan a field trip to Sandy Hook or a similar site to examine living organisms on beaches, water and land formations. Hypothesize the effect of pollutants on living organisms and the environment. Discuss jobs related to all aspects of the industry observed. 	1, 3, 7	2	1, 2, 3, 4, 7, 8, 12	1, 2, 9, 11	7
<ul style="list-style-type: none"> Form teams to develop, disseminate, and tabulate an opinion survey in the community. Determine the costs associated with developing and conducting opinion surveys. Prepare a bid sheet, keeping in mind costs and the profit motive. Present a sealed bid to the town council or other local group 	2, 3	1, 2, 4, 7, 8	1, 4, 8, 12, 15	1, 9, 11	7

Continued on next page

Sample Activities

List of CCWR Standards

	1	2	3	4	5
who will select the winning “contract.”					
<ul style="list-style-type: none"> Develop a visual presentation of the results and display the outcomes. 					
<ul style="list-style-type: none"> Brainstorm some of the possible solutions. Identify pros and cons. 				9	
<ul style="list-style-type: none"> Develop an action plan to dispose of toxic waste. Include related safety issues. Identify some of the regulations that are applicable to handling, transporting and disposing of toxic waste. Hypothesize why these regulations are necessary. Describe how the pollutants travel. 		1, 2, 5	1, 3, 4, 5, 11, 13, 14	1, 2	1, 2, 5, 6, 8
<ul style="list-style-type: none"> View and critique a film that depicts a communicable disease or hazardous health risk situation. Compare and contrast the solutions presented in the film with the research reviewed. Discuss the role of governmental health agencies in health issues. 	3		1, 2, 8, 12	5, 10	1, 5, 6, 7, 8
<ul style="list-style-type: none"> Investigate employment opportunities in the associated career pathway. 	2, 3, 5	2, 3, 5	4, 5	6	
<ul style="list-style-type: none"> Invite guest speakers from those business, industry, and government agencies. 	6, 7	6	10, 12		
<ul style="list-style-type: none"> Complete a cost analysis for the action plan. 	12	2, 3, 7, 8			
<ul style="list-style-type: none"> Create a multimedia presentation for the action plan. <p>Teacher Tip: A portion of the plan may be prepared in a different language representing the ethnic groups of the community.</p>	1	2, 3, 7, 9	1, 4, 8, 10, 14, 15	2, 6, 7, 11	7



Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Summarize the action plan; present to the people surveyed for their feedback.
- ▶ Write a letter to the editor supporting their position and include digital photos.

D. Extension

- ▶ Research procedures for handling spills of toxic materials.
- ▶ Include information on safety equipment and clothing.
- ▶ Videotape examples of damage resulting from pollutants in the community and include footage in a public service announcement for a local television channel.
- ▶ Contact a governmental agency in another country for information on its solutions to toxic-waste handling.

	1	2	3	4	5
▶ Summarize the action plan; present to the people surveyed for their feedback.	5	2, 7, 9	8, 9, 10, 12	1, 2, 3, 4, 9	7
▶ Write a letter to the editor supporting their position and include digital photos.		2, 3, 7, 8	1, 3, 8	5, 9	
▶ Research procedures for handling spills of toxic materials.	3	2, 3, 5	1, 3, 4, 5	10	1, 5, 6, 7
▶ Include information on safety equipment and clothing.					
▶ Videotape examples of damage resulting from pollutants in the community and include footage in a public service announcement for a local television channel.	3	2, 3, 6, 7, 8, 9, 10	1, 2, 3, 15	1, 2, 3, 9, 3, 9	
▶ Contact a governmental agency in another country for information on its solutions to toxic-waste handling.		2, 3, 5, 6	1, 3, 4	10	7

9-12

Statement A:

The local landfills are full. Propose a solution which encompasses local government, local citizens and local businesses.

Focus: Develop an action plan for the community.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.5, 4.7, 4.9, 4.12; Science 5.2, 5.2, 5.3, 5.4, 5.5, 5.6, 5.8, 5.9, 5.12; Social Studies 6.1, 6.5, 6.5, 6.12; World Languages 7.1, 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: The student will

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Brainstorm the types of garbage generated by homes, businesses, and government agencies. ▶ Categorize waste by types and calculate the volume of the waste handled for the community. 				9	
<ul style="list-style-type: none"> ▶ Conduct a longitudinal study of incentives and disincentives for recycling products. ▶ Hypothesize forces that are responsible for increased production of waste in the community, state, and world. ▶ Identify public and private agencies that accept items for recycled use and explain the benefits, e.g., eyeglasses, batteries, cars, etc. <p>Teacher Tip: Students may want to focus on a study for the school rather than on a study for the entire community.</p>		2, 3, 4, 5, 6, 7, 8	1, 3, 4, 5, 8, 9, 10, 12	2, 9, 10	
<ul style="list-style-type: none"> ▶ Contact a local waste management firm and gather data on the costs associated with disposing of various types of products. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Compare costs to consumers and costs to the waste management firm. ▶ Hypothesize the cost for the school, a selected business, a 	12	2, 3, 4, 7, 8	2, 3, 4, 5, 8, 9, 10	3	7, 8

Continued on next page



Sample Activities

List of CCWR Standards

	1	2	3	4	5
government agency, and a typical home in the community.					
▶ Calculate and chart the actual costs to comply with regulations and implement safety and health precautions.					
▶ Research the issues and find an article that identifies attempts to establish a new waste disposal location/plant.		1, 2, 3, 5, 6, 7	1, 3, 4, 5, 8, 12, 15	1, 2	
▶ Examine the pros and cons of developing the site/plant.					
▶ Investigate potential hazards the transportation of toxic waste poses to the communities it must pass through and what can be done to prevent accidental spills.					
▶ Develop a marketing plan and one public relations piece to convince residents of the need for the site/plant.					
▶ Plan and conduct experiments of various materials e.g., aluminum, newspaper, glass, plastic to determine their properties and the ability to be recycled. Teacher Tip: Students may need to research the properties of the materials.		2	1, 2, 3	7, 9	6, 8
▶ Create a table comparing the advantages and the disadvantages of incineration as a disposal method.		2,4	4, 5, 8, 9, 12	10	6, 8
▶ Create a visual presentation on safe ways of disposing of various materials or products.		2, 8	1, 8, 15		5, 6, 7 8
▶ Develop and execute a plan for assisting a community organization that redistributes previously used materials to other residents. Teacher Tip: Plan a volunteer or community-service project and have students add an entry on their participation to their resums.	1, 3, 5, 8, 10	2, 3, 7	10	1, 2, 3, 6, 9	7
▶ Design and develop an object that uses recycled materials as the energy source.		1, 2, 3, 8	1, 2, 3, 6, 10, 11, 14, 15	1, 2, 11	4, 7
▶ Trace the issue of waste disposal through past eras. Include information on health and sanitation issues.		3, 5, 6, 7	4, 5	10	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Compare current waste quantities and disposal techniques around the world. <p>Teacher Tip: Recommend communications via the Internet that might include native languages.</p>		3, 5, 6, 7	3, 4, 5, 8, 9	10	
<ul style="list-style-type: none"> ▶ Prepare a proposal for the community that will maximize the reuse of unwanted products, as well as minimize the amount of waste to be disposed. 		2, 3, 5, 6, 7, 8	4, 5, 11, 14	1, 2	2, 6, 7
C. Reflection/Evaluation					
<ul style="list-style-type: none"> ▶ Research an article that shows the ways in which people have been helped through recycling projects. Write a narrative on feelings about the project. 		2, 3, 5, 6, 7, 8	10		
<ul style="list-style-type: none"> ▶ Write a futuristic story about what the earth will be like if the waste keeps increasing. ▶ Illustrate or dramatize the story. 		3, 8	1, 8, 10		
D. Extension					
<ul style="list-style-type: none"> ▶ Research and plan experiments to determine ways of limiting the deterioration of food products that results in waste. ▶ Write up lab procedures and results. 		2, 3, 5, 6, 7, 8	1, 3, 6, 7, 8, 9, 14	2	6, 7
<ul style="list-style-type: none"> ▶ Debate the ethics and impact of genetic engineering. 			10	10	
<ul style="list-style-type: none"> ▶ Use previously owned garments to make a quilt to be donated to a charity or a health-care facility. 	8	7, 8	1, 13, 15	1, 2, 5, 9	7
<ul style="list-style-type: none"> ▶ Create a sculpture using recycled materials. ▶ Form a company whose purpose is to sell its artistic works for profit. ▶ Develop an organizational design diagram. ▶ Define roles for various positions. ▶ Apply for positions and perform duties in the following areas: develop an operational budget, develop and implement a plan for a show, develop a plan and solicit contributions, plan and implement marketing strategies, develop and hold tours, 	1, 2, 5, 7, 9, 10, 11, 12	2, 3, 4, 8	2, 15	1, 2, 3, 9, 11	7

Continued on next page



List of CCWR Standards

Teacher Tip: Tour exhibits that use farm tools as components of the artistic creations, e.g., dinosaurs.

- ▶ Research and chart the sources of toxic waste.
- ▶ Propose methods to limit toxic waste in the community.

1	2	3	4	5
	7, 8	1, 13, 15	1, 2, 5, 9	7
	5, 6	3		6, 7, 8

K-4

Statement B:

A schoolwide unity day to celebrate diversity is being planned by the school. As part of the celebration, a mini-Olympics will be held. A plan needs to be developed and implemented to include opening exercises, main events, and closing ceremonies. A small budget has been allocated but will need to be supplemented.

Focus: Develop an understanding of the components of an Olympic celebration. Plan, implement, and evaluate a schoolwide mini-Olympics.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.5, 2.6; Language Arts Literacy 3.2, 3.3, 3.5; Mathematics 4.1.3, 4.1.8; Science 5.3; Social Studies 6.8; World Languages 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

		List of CCWR Standards				
		1	2	3	4	5
<ul style="list-style-type: none"> Discuss the cultural diversity of participants in various Olympic events. Create a visual representation highlighting the different cultural groups. 			5, 6, 7, 8	4, 5, 9, 12	6	
	<ul style="list-style-type: none"> Compare and contrast differences in participants' backgrounds, skills, limitations, ethnicity, gender, languages, etc. 		4, 6, 7	4, 5, 9, 12	6	
	<ul style="list-style-type: none"> View excerpts from Olympic events. Create a concept chart of the components of an Olympic celebration, e.g., opening and closing ceremonies, various sporting competitions. 		7	7, 8, 9		
<ul style="list-style-type: none"> Plan events to be held in the school's Olympics. <p>Teacher Tip: Committees may be divided by grade/developmental level, classes, or committees within a single class.</p>		2, 3	4, 6, 7, 8	1, 4, 5, 8, 13, 15	1, 2, 3, 9, 11	1, 2, 5, 6, 7, 8, 9

Continued on next page



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Brainstorm the type of emergencies that might occur during ▶ Develop a plan that addresses how emergencies will be handled. 		2	1, 3, 15	9	1, 2, 6, 8, 9
<ul style="list-style-type: none"> ▶ Discuss job opportunities that will be available for the Olympic events. ▶ Establish the framework for applying for positions and carrying out functions. 	2, 3, 5, 9, 10, 11	2, 6, 7	4, 5, 13	1, 2, 6	
<ul style="list-style-type: none"> ▶ Develop a procedure for compensation, rewards, incentives, etc., for completing assignments/job tasks. 	1, 5, 12	2, 7, 9	1, 4, 5, 11, 13	1, 2	
<ul style="list-style-type: none"> ▶ Devise a marketing plan and publicize the school Olympics to the school community. 	3	6, 8, 9	4	2, 9	
<ul style="list-style-type: none"> ▶ Listen to several musical themes. ▶ Discuss theme, tempo, beat, and the feelings they evoke. ▶ Select a musical theme to use for the opening and closing ceremonies. ▶ Write and perform a song in another language. 		8	1, 10, 15	1	
<ul style="list-style-type: none"> ▶ Develop noncompetitive activities to participate in as an individual or team. ▶ Include games that are specific to different cultures. 		6	5	2, 6, 7	1, 6, 7
<ul style="list-style-type: none"> ▶ Produce a banner celebrating diversity for each class or team to carry into the arena for the opening ceremony. ▶ Develop the banners in a second language being studied. <p>Teacher Tip: Demonstrate safety procedures and the safe use of tools and equipment during banner production.</p>		8, 9	1, 15	6, 9	1, 4, 7, 8
<ul style="list-style-type: none"> ▶ Discuss sportsmanship and ways to practice it in the activities. ▶ Identify and discuss rules of sportsmanship. 	1			2, 6, 7	
<ul style="list-style-type: none"> ▶ Analyze a case study on a conflict situation in a mini-Olympics. ▶ Discuss issues. ▶ Use puppets or similar materials to present solutions. 	5		1, 2, 11, 13, 14	6	

Sample Activities

- ▶ Chart the fastest, average, and slowest times for selected events.

Teacher Tip: *Wherever appropriate, substitute distance, height, and/or weight for the time.*

C. Reflection/Evaluation

- ▶ Discuss whether participants had fun through the planning of and participation in the event.

- ▶ Explain how the diversity of the participants contributed to the success of the event.

- ▶ Talk about why everyone can have fun, winning or losing.

- ▶ Evaluate the success of the event.

- ▶ Monitor feelings about participating in the program.

D. Extension

- ▶ Watch a Special Olympics event and compare it with the school's event.
- ▶ Visit, if possible, an Olympic training site or a site for field activities.

List of CCWR Standards

1	2	3	4	5
	2, 7			
			3, 4, 5	
			6	
			3	
			11	
		10	3, 11	
		9, 12		7

Continued on next page



5-8

Statement B:

A schoolwide unity day to celebrate diversity is being planned by the school. As part of the celebration, a mini-Olympics will be held. A plan needs to be developed and implemented to include opening exercises, main events, and closing ceremonies. A small budget has been allocated but will need to be supplemented.

Focus: Develop an understanding of community and individual differences celebrated in a Special Olympics.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.3, 1.4; Comprehensive Health and Physical Education 2.5,2.6; Language Arts Literacy 3.2, 3.5; Mathematics 4.5, 4.6, 4.9; Science; Social Studies 6.9; World Languages 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: The student will

- ▶ Research the summer or winter Olympics.
- ▶ Include a segment on times when local community Olympics were not held due to political or other conflicts.

Teacher Tip: Visit www.specialolympics.org.

- ▶ Explore the use of conflict resolutions skills in situations where groups or individuals disagree.

- ▶ Identify the ethnic diversity in the town and research the cultural background of each.
- ▶ Research changes in the demographic make up of our country.
- ▶ Analyze the data in a spreadsheet program using algebraic formulas.
- ▶ Present the results in a graph.

- ▶ Research the languages of the various ethnic groups of the community and act as interpreters at planned events.

1	2	3	4	5
	5, 6, 7	1, 4, 5, 8		
1		1	4, 5, 6, 7	
	4, 6, 7	4, 5, 12	6	
	4, 6, 7	4, 5, 12	6	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> Investigate Special Olympics and invite participants in this initiative to speak. Role-play participation in a Special Olympics event. <p>Teacher Tip: Emphasize self-worth, self-image, and evaluation related to winning and losing and accomplishments.</p>		4, 6, 7	4, 5	6, 7	3, 7
<ul style="list-style-type: none"> List jobs that will be available in producing a Special Olympics, e.g., coaches, athletic trainer, scheduler, judges, sales. 	9	2, 7	4	2	
<ul style="list-style-type: none"> Select a job and research the skills required to perform that job. Write a letter of application; participate in a job interview. Perform the tasks associated with the job. 	2, 3, 5, 7, 8, 10, 11	4, 6, 7	4, 5		3, 4, 5, 7
<ul style="list-style-type: none"> Develop opening and closing activities that include a dance, song, and welcome speech, etc., incorporating languages represented in the community. 		6	5, 15	2, 6, 7	3, 6, 7
<ul style="list-style-type: none"> Develop competitive and noncompetitive events. Compare the skills necessary for events with employability skills. 	1, 5	6	9	2, 6, 7	1, 3, 8
<ul style="list-style-type: none"> Recommend a comprehensive plan for the safe participation of all guests/participants. 		6	4, 11, 13		2, 8, 9
<ul style="list-style-type: none"> Develop a training program concerned with the specific demands of each event, e.g., physiological, nutritional. 		4, 6, 7	15	1, 9	2, 5
<ul style="list-style-type: none"> Develop an advertising campaign in multiple languages/or in a language other than English. 		4, 6, 8	4, 15	1, 6	
<ul style="list-style-type: none"> Establish and develop competitive teams to plan and execute a plan for innovative ways to raise funds. Identify the team that raises the most money. Determine a reward for the winner. Compare and contrast anticipated revenue with actual revenue. Plan for team distribution of profits and awards. Analyze the techniques used by the winning team and <p><i>Continued on next page</i></p>	1, 2, 5 12	4, 5, 6, 7	4, 5, 15	1, 2, 9	7, 8



Sample Activities

List of CCWR Standards

	1	2	3	4	5
determine strategies for future improvement. <i>Teacher Tip: Follow district policies and procedures with regard to fund-raising.</i>					
C. Reflection/Evaluation					
▶ Evaluate the job selected and write a short essay on what was liked, what disliked or what could be improved for next time.	2, 3, 5		2, 8, 10, 11	1, 3, 11	
▶ Compare the feelings created by competitive and noncompetitive events.			11	3, 11	
▶ Determine the success of efforts to involve participants and spectators. ▶ Analyze data and present information on the number of spectators and the number of participants in events. ▶ Analyze the data in a spreadsheet program using algebraic formulas.		4, 7	7, 8, 12	2, 3	
▶ Role-play participation in Special Olympics event. ▶ Record feelings and abilities in a journal.			10	2, 3, 6	3
▶ Develop an injury prevention program for athletes, spectators, event organizers, coaches, or judges, etc. which would also include first aid procedures.		6			1, 2, 6, 9
D. Extension					
▶ Volunteer to serve on committees for the state's Special Olympics.	1, 3, 8, 9			2, 6, 7	7

9-12

Statement B:

A schoolwide unity day to celebrate diversity is being planned by the school. As part of the celebration, a mini-Olympics will be held. A plan needs to be developed and implemented to include opening exercises, main events, and closing ceremonies. A small budget has been allocated but will need to be supplemented.

Focus: Develop an understanding of the components of an Olympic celebration. Plan, implement, and evaluate a schoolwide mini-Olympics.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2; Comprehensive Health and Physical Education 2.2, 2.3, 2.5; Language Arts Literacy 3.2, 3.5; Mathematics 4.2; Science 5.1, 5.3; Social Studies 6.5; World Languages 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: The student will

- ▶ Determine and convene essential committees to host Olympics such as financial; advertising; main events; opening and closing events; crowd care; awards; transportation; security; food; medical care; lodging; facilities construction; cleanup, etc.
Teacher Tip: Include cultural diversity and customs.
- ▶ Develop job descriptions and highlight transferable skills.
- ▶ Develop application scoring sheet.
- ▶ Apply for positions on the committee.
- ▶ Develop a committee implementation plan based on consensus and the integration of ideas.
- ▶ Investigate the sites of past Olympic events.
- ▶ Compare and contrast cultures and their impact on experiences.

List of CCWR Standards

1	2	3	4	5
5	4, 6, 7, 8	1, 4, 8	1, 2, 6	8
2, 3, 5, 9, 10, 11				
1	7, 8	1, 4, 8, 15	1, 2, 4, 5, 7, 9	2
	4, 5, 6, 7	1, 4, 8, 9, 12	6	



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Analyze the incidence of injuries and accidents and determine safety hazards at Olympic training or events. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Develop an injury prevention plan. 		4, 6, 7, 8, 9	12		1, 2, 5, 8, 9
<ul style="list-style-type: none"> ▶ Construct a personal schedule for an Olympic athlete. 		8	13		
<ul style="list-style-type: none"> ▶ Develop a complete itinerary for an athlete, a spectator, media personnel, support teams, and local citizens. 		8	5, 8, 15		
<ul style="list-style-type: none"> ▶ Develop a multimedia presentation on careers in sports, tourism, hospitality, media, and communications in the state of New Jersey. 	3, 9	2, 8, 9	15	9	
<ul style="list-style-type: none"> ▶ Conduct the schoolwide mini-Olympics to implement all planned phases. 	1, 3, 5	9	15	5	1–9
<ul style="list-style-type: none"> ▶ Propose solutions to drug use in competitive athletic events. 		6	3, 4, 5	8	1
<ul style="list-style-type: none"> ▶ Develop scoring and record-keeping systems for time, distance awards, technical difficulty, etc. 		1, 4, 7, 8			
<ul style="list-style-type: none"> ▶ Establish a banking system for currency exchange, etc. 	12	4, 7			
<ul style="list-style-type: none"> ▶ Calculate the costs and expenses to hold an Olympic festival. 	12	2, 7			
C. Reflection/Evaluation <ul style="list-style-type: none"> ▶ Assess group work as it relates to achieving a goal. ▶ Explain difficulties and conflicts. ▶ Propose resolutions. ▶ Write a story with two endings: one that illustrates successful conflict resolution and one that depicts the results of an unsuccessful resolution. 			3, 13	4, 5, 11	

Sample Activities

List of CCWR Standards

D. Extension

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Analyze tapes of previously held Olympics for media coverage effectiveness. ▶ Predict the Neilson ratings. ▶ Draw a comparison between the techniques used and the number of viewers. 		4, 5, 6, 7	8, 12		
<ul style="list-style-type: none"> ▶ Study the different societal influences on rules and how the Olympic rules were implemented. ▶ Determine if they reflect the changing times. ▶ Project and debate specific changes. 		5, 6	3, 4, 5, 8, 9, 11, 14	3, 4, 5, 7, 9	
<ul style="list-style-type: none"> ▶ Develop menus and foods reflective of various cultures to be sold at Olympic events. 				6, 9	
<ul style="list-style-type: none"> ▶ Design blueprints, site plans, etc., for new buildings to be constructed at the site and create models. ▶ Develop and produce brochures for various events, schedules in different languages, menus, etc. 		4, 6, 7, 8, 9	4, 8, 15	1, 2	6, 7
<ul style="list-style-type: none"> ▶ Divide into committees and participate in an entrepreneurial project for the production, marketing, and sales of Olympic souvenirs. ▶ Develop a business plan for the overall project that is focused on a target audience. ▶ Keep detailed budget and accounting records. 	3, 8, 12	8	15	1, 2, 3, 9	4, 7, 8



K-4

Statement C:

Statistics indicate that drugs have an impact on worker productivity and safety. Develop a program or campaign focusing on the reduction of substance abuse in the community and in the workforce.

Focus: Develop general awareness about substance abuse and its effect on personal behaviors and life.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.4, 1.5; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.6; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics; Science 5.1, 5.2, 5.3, 5.6; Social Studies 6.1; World Languages

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
▶ Use a book, a cartoon, or a program to identify the role models, character traits, and problem behaviors (include substance abuse) of people in various employment and life situations.	1, 2, 5		4, 5	6	5
▶ Implement an incentive program to acknowledge students who display good character traits.	2, 5	2	15	1, 2, 11	
▶ List and discuss the reasons for taking drugs.			1, 3, 9	3	
▶ Distinguish between a good drug and a bad drug.			1, 3, 9	8	1, 6, 8
▶ Differentiate between the use and abuse of substances.			3, 5	8	1, 6
▶ Draw a cartoon promoting a healthy lifestyle.			1, 10		
▶ Analyze the effect of individual choices, including drug use, on family, community, education, and employment (performance and safety).		5	9, 12		1, 6

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Role-play making choices in given situations and hypothesize the impact of the decisions made. 			1, 3, 13	2, 8	
<ul style="list-style-type: none"> ▶ Practice saying no to drugs/substances. 				8	
<ul style="list-style-type: none"> ▶ Discuss how substance abuse by community helpers and workers might affect people. ▶ Identify the range of injuries and accidents that might occur as a result of a worker's use of drugs. 	1	6	8		6, 8
<ul style="list-style-type: none"> ▶ Develop a poster campaign depicting the importance of a drug-free workplace and community. Display the posters throughout the school or parade them around the block. <p>Teacher Tip: Ask the police department to help with traffic control.</p>	1	8		1, 2	1, 2, 8
<ul style="list-style-type: none"> ▶ Invite the school student assistance counselor or other available professional to address the class on substance abuse. <p>Teacher Tip: The school counselor is a good resource for building students' self-esteem and for substance abuse prevention.</p>			4, 5	8	
<ul style="list-style-type: none"> ▶ Develop questions and interview a parent/guardian or relative about substance abuse and consequences in the workplace. 	1, 2		3, 8	6	
C. Reflection/Evaluation					
<ul style="list-style-type: none"> ▶ Create a journal of personal character traits that make you special (use print or pictorial representations). 			4	3, 8, 10	
D. Extension					
<ul style="list-style-type: none"> ▶ Using a word-processing program, create a story that illustrates the impact of the character traits and skills discussed in the world of work. 	1, 2, 5	2, 8	1		
<ul style="list-style-type: none"> ▶ Hold a ceremony to declare "I am drug-free." 	1	2		3, 8	9
<ul style="list-style-type: none"> ▶ Collect nonperishable items and money. ▶ Take a trip to a local food bank/soup kitchen to donate items. 	8, 12	2		1, 2	3, 6, 7, 8



5-8

Statement C:

Statistics indicate that drugs have an impact on worker productivity and safety. Develop a program or campaign focusing on the reduction of substance abuse in the community and in the workforce.

Focus: Develop an antidrug media campaign.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.4; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.6; Language Arts Literacy 3.1, 3.2, 3.4, 3.5; Mathematics 4.1, 4.2, 4.5, 4.7, 4.12; Science 5.1, 5.6; Social Studies 6.1; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Using a spreadsheet program, analyze the extent of drug use in our country over the last ten years. ▶ Present the results in a graph. Research the effects of substance abuse on human physiology and human behavior. ▶ Research on the Internet the impact of substance abuse on the workplace. 		4, 5, 7	1, 8	10	
<ul style="list-style-type: none"> ▶ Choose and invite students and speakers from the community to discuss the impact of substance abuse on life and employment (examples: sports, clubs, military, officeholders). 	2		4		6
<ul style="list-style-type: none"> ▶ Identify jobs where safety might be compromised if a worker is using drugs. ▶ Create a database related to loss of time, injuries, costs to employers, etc. ▶ Analyze the data in a spreadsheet program using algebraic formulas. 		4	5		1, 6
<ul style="list-style-type: none"> ▶ Organize and evaluate different advertisement campaigns. ▶ Brainstorm advertising methods on the board and break into 		2, 8	3, 15	1, 2, 7, 9	

Continued on next page

Sample Activities

List of CCWR Standards

	1	2	3	4	5
subcommittees to establish short- and long-term goals, set up a timeline, identify resources and materials for project completion, and establish roles for the group.					
<ul style="list-style-type: none"> ▶ Form small groups and research methods of advertising. ▶ Search various resources for existing ad campaigns targeting substance abuse. ▶ Evaluate the effectiveness of the advertising. 		3, 5, 6, 7	2,5	2, 10	
<ul style="list-style-type: none"> ▶ Analyze antidrug ad campaigns from different countries. ▶ Identify methods of propaganda included in the various campaigns. 		5	9, 12		
<ul style="list-style-type: none"> ▶ Investigate various careers in advertising through research and speakers. (Speakers share their knowledge and samples of their ad campaigns.) 	3, 5, 6	6	4		
<ul style="list-style-type: none"> ▶ Organize, synthesize, and evaluate the different ad campaigns for their target technique. Keep a log. 		3, 5, 6, 7	7, 8, 9		
<ul style="list-style-type: none"> ▶ Plan and implement an “Ask the Experts Day” to consult experts in the fields of advertising, television, media, and print. ▶ Include such topics as the use of technology, problems, career opportunities, and academic preparation to facilitate the development of the advertising campaign. 	1, 2, 3, 5, 7	10	3, 4	7, 11	9
<ul style="list-style-type: none"> ▶ Create a media ad campaign that uses persuasive techniques and focuses on reducing substance abuse in the workplace. ▶ Use strategies such as PowerPoint presentations, radio commercials, television ads, plays, short films, posters, bumper stickers, T-shirts, painters hats, songs and raps. ▶ Include inter- and intrapersonal skills and safety in the workplace. 		2, 4, 5, 6, 7, 8, 9	15	1, 2, 9, 10	3, 4, 7, 9
<ul style="list-style-type: none"> ▶ Design a rubric to evaluate the ad campaigns. 		2	8		
<ul style="list-style-type: none"> ▶ Present ad campaigns to an audience, referencing the various advertising related careers that would be involved in preparing and presenting ad campaigns in the workplace. 	3, 5, 6, 7	2, 8, 9	15	9	



Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Add journal entries that describe an understanding of how advertisements have changed and how advertisements have had an effect on their life.

- ▶ Conduct a survey to determine the best campaigns.

- ▶ Develop and host a contest for teams to present ad campaigns to judges.

D. Extension

- ▶ Participate in job shadowing at an advertising firm to determine personal skills and competencies for employment.

- ▶ Identify contacts to offer the “best campaigns” to local radio and television stations to use as public service announcements.
- ▶ Make these “best campaigns” available for community businesses to use in their employee training programs.
- ▶ Track the winning campaigns that were used by the stations and the companies. Analyze the campaigns for similarities and differences that led to their selection.

- ▶ Hypothesize ways in which advertising will be used in the future.

	1	2	3	4	5
▶ Add journal entries that describe an understanding of how advertisements have changed and how advertisements have had an effect on their life.		10	9, 10, 12		
▶ Conduct a survey to determine the best campaigns.		2, 4, 10	3, 12		
▶ Develop and host a contest for teams to present ad campaigns to judges.	1	2, 9	4	1, 2	
▶ Participate in job shadowing at an advertising firm to determine personal skills and competencies for employment.	3, 4, 7		4, 7	9, 11	9
▶ Identify contacts to offer the “best campaigns” to local radio and television stations to use as public service announcements.		2	3, 4, 9, 14	4, 11	7, 9
▶ Make these “best campaigns” available for community businesses to use in their employee training programs.					
▶ Track the winning campaigns that were used by the stations and the companies. Analyze the campaigns for similarities and differences that led to their selection.					
▶ Hypothesize ways in which advertising will be used in the future.			3		

9-12

Statement C:

Statistics indicate that drugs have an impact on worker productivity and safety. As a CEO, develop a program focusing on the reduction of substance abuse in the workplace.

Focus: Develop a substance-abuse prevention program for the workplace.

Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.1, 2.3; Language Arts Literacy 3.1–3.5; Mathematics 4.1–4.5, 4.11; Science 5.1, 5.2, 5.5, 5.6; Social Studies 6.1, 6.6; World Languages 7.1

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

		List of CCWR Standards				
		1	2	3	4	5
<ul style="list-style-type: none"> Interview local business leaders, union leaders, and local medical personnel to ascertain the perceived extent and impact of substance abuse in the workforce in the local area. 				3, 4, 12		9
	<ul style="list-style-type: none"> Survey local companies to determine the number of companies that have operational substance abuse programs and related safety and health guidelines in their workplace. 		2, 4, 7, 9	3, 4		8
<ul style="list-style-type: none"> Research the statistical data on the financial consequences of substance abuse in the workforce. <p>Teacher Tip: <i>Students may calculate the financial impact of drug abuse on their community. Research hospital and police records, approximate costs in lost staff time, medical care, damaged property, etc.</i></p>	12	2, 3, 4, 5, 6, 7	3, 12	10		
<ul style="list-style-type: none"> Develop a web page that lists the types of employment positions available in a company. Develop a list of jobs done by each type of employee and post on the web site. Include a section on the web page on policies, procedures, and help on substance abuse issues. Develop community survey and post on the web site. 	3, 5	1, 7, 10	1, 4, 8, 15	9		7

Continued on next page



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Post information with “hit” counters to determine number of people accessing the information and responses to survey items. ▶ Determine ways to tabulate results. ▶ Develop a marketing strategy and implement it to encourage people to visit the web site. 					
▶ Investigate the relationship between substance use and abuse with accidents and violence.		5, 6	5, 9, 12		1, 8
▶ Research the consequences of a criminal record on acceptance into a college or employment.	2	5, 6	4, 9, 12	10	
▶ Investigate the prevalence of drug testing in the workplace.		5, 6, 7	4, 5, 8		
▶ Establish a strategy for reducing substance abuse in the company.			15	8	
▶ Develop role-playing skits that demonstrate effective and ineffective methods of intervention when dealing with coworkers and/or employees who have a substance dependency or usage problem.			1, 13	2	8
▶ Collect, analyze and produce timely, culturally sensitive company policy information concerning substance use and abuse.		8	4, 8	6	6, 8, 9
▶ Develop a model substance-abuse prevention program for business and industry. <i>Teacher Tip: This program may be written in different languages.</i>			15		8
C. Reflection/Evaluation					
▶ Write an essay on how the learner defines acceptable substance use as related to personal performance in the workplace.	1		10		

Sample Activities

List of CCWR Standards

	1	2	3	4	5
▶ Role-play both the manager's and the employee's role when an employee has displayed behavior that indicates possible substance abuse.	1		1	2, 6	8
▶ Investigate careers that relate to substance-abuse testing, counseling, and treatment and visit the work sites of individuals in these careers.	3, 5, 6	5, 6	4, 5		9
▶ Compare and contrast the effects of different substances on various tasks in the workplace.		5, 6	4, 5, 9, 12		
▶ List individual short- and long-term goals and analyze the impact of substance abuse on the possible attainment of those goals.			10	1	
▶ Determine how to improve an existing long-range strategic plan based on local needs for preventing substance abuse in the community.			3, 4, 8, 13, 15	1, 9	8
▶ Develop such a plan if none exists.					
D. Extension					
▶ Develop a Peer Leaders Program for addressing student concerns.			1, 2, 3, 4, 15	2, 5, 7	
▶ Debate incarcerating or rehabilitating a drug abuser.			1, 3, 8, 14	9	8



K-4

Statement D:

Climatic conditions have changed in the twenty-first century. Research scientists are looking to the oceans to create habitable communities. Create an underwater community.

Focus: Students will explore the ocean as a habitat for human life.

Links to Other Standards: Arts (Visual and Performing) 1.6; Comprehensive Health and Physical Education 2.1, 2.4; Language Arts Literacy 3.2, 3.3; Mathematics; Science 5.3, 5.5, 5.6, 5.7, 5.8, 5.10, 5.12; Social Studies 6.4, 6.5; World Languages 7.1

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

- | | 1 | 2 | 3 | 4 | 5 |
|---|---|---------|------------|----|---|
| <ul style="list-style-type: none"> ▶ Define the term “ocean.” ▶ Compare and contrast with other bodies of water. ▶ Identify devices and products necessary to live on the ocean floor. ▶ Calculate the amounts of goods needed to sustain a community for a year. | | 6 | 1, 3, 5 | | |
| <ul style="list-style-type: none"> ▶ Study fresh- and saltwater bodies, including water currents and waves, vegetation, marine life, and land formation on the ocean floor. ▶ Categorize terminology using two languages. ▶ Create models of the water cycle. | | 6, 7, 8 | 2, 12 | | |
| <ul style="list-style-type: none"> ▶ Plan and conduct experiments focused on buoyancy, water movement and tides, and the ability of water to support life. ▶ Compare similarities. ▶ Contrast differences. ▶ Construct a Venn diagram. | | | 2, 6, 7, 8 | 10 | 7 |
| <ul style="list-style-type: none"> ▶ Investigate the types of fresh- and saltwater plant and animal life that might be harvested as future sources of food. | | 5, 6 | 5, 9 | | |

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Plan and construct a water-tight ocean floor habitat. ▶ Identify the skills required to construct it. 	5	1	15	2, 7	6, 7
<ul style="list-style-type: none"> ▶ Develop an illustrated book depicting plant and animal life in the oceans. ▶ Label them in two languages. 		8	8		
<ul style="list-style-type: none"> ▶ Explore career opportunities associated with ocean habitats. 	3, 6, 7	6	5	10	
<ul style="list-style-type: none"> ▶ Compare the consumption of marine-based foods by humans in various cultures. ▶ Create a graph that illustrates the types and amounts of marine-based foods consumed by humans in various cultures around the world. 		6	5, 9		
C. Reflection/Evaluation					
<ul style="list-style-type: none"> ▶ Write a story about the life of a person living in a sphere on the ocean floor. 			10		8
<ul style="list-style-type: none"> ▶ Present the stories and critique based on the ability to sustain life. 			10	4, 5	
<ul style="list-style-type: none"> ▶ Evaluate projects with class/student-created rubrics. 			10, 14	11	
D. Extension					
<ul style="list-style-type: none"> ▶ Invite professionals in the marine/ocean food and science industry to speak. ▶ Read books related to life in and on the seas. ▶ Schedule trips to aquariums, science museums, and exploratoriums. 	3, 5, 7		3	9	6, 8, 9
<ul style="list-style-type: none"> ▶ Plan and take a field trip to an aquarium. 	3			1, 2	7
<ul style="list-style-type: none"> ▶ Create a cartoon about the life of a person in an underwater environment. 					8
<ul style="list-style-type: none"> ▶ Complete a job-shadowing experience with aquarium workers. 	2, 3, 4, 7			9	8



5-8

Statement D:

Climatic conditions have changed in the twenty-first century. Research scientists are looking to the oceans to create habitable communities. Create an underwater community.

Focus: Work in project teams to develop an aquatic biosphere.

Links to Other Standards: Arts (Visual and Performing) 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.4; Language Arts Literacy 3.1, 3.2, 3.4; Mathematics 4.7; Science 5.6, 5.9, 5.10; Social Studies 6.3, 6.7, 6.8, 6.9; World Languages

Sample Activities**List of CCWR Standards**

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
▶ Define a “community.”			4		
▶ Develop a chart on the components of a community, e.g., the makeup of a community, the method of government, the responsibilities of the members, site plan and architecture, unique features, the goods and services needed in a community.	3	2, 5, 6, 8	1, 2, 3, 9		
▶ Write an essay explaining what the learner likes about living in a community on land and compare to hypothetical living in an underwater environment.		8	3, 9, 10		
▶ Divide into project teams to	1, 3, 5, 7	1, 2, 5, 6	1, 3, 4, 12, 13	1, 2, 9, 10	8
1. research an ocean location;					
2. determine the kind of government and the roles that are needed in the underwater community. Include description of role;					
3. determine the kinds of jobs, worker qualities, and profession that would be needed to design and construct the underwater community;					
4. determine the kinds of businesses, jobs, worker qualities, services and professions that would be needed in the community, including job descriptions;					

Continued on next page

Sample Activities

List of CCWR Standards

	1	2	3	4	5
5. design an educational system that would be needed to serve a community of this size. Including job descriptions. Teacher Tip: Provide examples of job descriptions for students to review.					
▶ Each subcommittee will select, develop, and present to the class a design model based on the above research.	1	1, 2, 8, 9	15	1, 2, 7, 9, 10	8
▶ Research light sources that can be used for food production under water.		6		10	
▶ Calculate water pressure for different levels of underwater living.		7			
▶ Create an aquatic biosphere. Teacher Tip: Emphasize safety during the construction.		2, 9	15	1	4, 7
▶ Develop a portfolio detailing observations of life in the Biosphere.			2, 7		
▶ Critique a movie related to underwater living.	3, 5, 6, 9	5, 6	1, 2	5	5, 6
▶ Identify ideas and issues that may affect the underwater community.					
▶ Identify the jobs, roles, and careers needed to sustain such a community. Investigate career options associated the film industry.					
▶ Divide into teams to create a video on the ways raw materials from the ocean are used.		1, 9, 10	15	1, 2, 9, 11	7
▶ Research companies that have an association with the raw materials.					
▶ Contact a potential corporate sponsor for support of the video development.					
▶ Hold a competition to determine the winning video in various categories.					
▶ Plan and hold a movie award night.					
▶ Create a pie chart that illustrates the allocation of resources needed for life in the biosphere.		2	10		
▶ Justify resource allocation.					

Continued on next page



Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Critique design models for feasibility, presentation style, and completeness.
- ▶ Compare and contrast similarities and differences.
- ▶ Include the estimated cost of each.

- ▶ Complete a team and self-assessment on the biosphere project.
- ▶ Include assessment of personal achievements and problems associated with the model.
- ▶ Identify elements that might be changed in the future.

D. Extension

- ▶ Display models in the media center or office and elicit feedback from others.

- ▶ Invite guest speakers from city-planning, architecture, oceanography, etc., to share their roles, responsibilities, and expertise in building communities.
- ▶ Discuss the role of consultants when planning and developing a project.

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Critique design models for feasibility, presentation style, and completeness. ▶ Compare and contrast similarities and differences. ▶ Include the estimated cost of each. 	12	1	2, 8, 9, 12, 14	4, 5	
<ul style="list-style-type: none"> ▶ Complete a team and self-assessment on the biosphere project. ▶ Include assessment of personal achievements and problems associated with the model. ▶ Identify elements that might be changed in the future. 	2		8, 10	3, 4, 5, 6	
<ul style="list-style-type: none"> ▶ Display models in the media center or office and elicit feedback from others. 			10	3, 4, 5, 6	4
<ul style="list-style-type: none"> ▶ Invite guest speakers from city-planning, architecture, oceanography, etc., to share their roles, responsibilities, and expertise in building communities. ▶ Discuss the role of consultants when planning and developing a project. 	3, 5, 6, 7		3	11	

9-12

Statement D:

Climatic conditions have changed in the twenty-first century. Research scientists are looking to the oceans to create habitable communities. Create an underwater community.

Focus: Design and create an underwater community, taking into consideration global socio-political perspectives.

Links to Other Standards: Visual Arts 1.6; Health and Physical Education 2.1, 2.2; Language Arts 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.2, 4.3, 4.5, 4.7, 4.9, 4.10; Science 5.1, 5.2, 5.4, 5.5, 5.6, 5.9, 5.12; Social Studies 6.7, 6.8, 6.9; World Language 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Evaluate the importance of aesthetics, design, and construction concepts in community planning. ▶ Discuss the role of architects in community planning. ▶ Identify the different occupations that might be needed in order to construct an underwater community. 	3, 7		2, 3, 4, 9	5	8
<ul style="list-style-type: none"> ▶ Investigate technological equipment related to weather and environmental conditions. 		2, 6	5		1
<ul style="list-style-type: none"> ▶ Identify the number and types of illnesses and injuries that occur to workers who work in commercial diving operations. ▶ Calculate the number of illnesses and injuries that might occur in the construction of an underwater community. 		1, 10	1, 3, 5, 9, 12		1, 5, 8, 9
<ul style="list-style-type: none"> ▶ Recommend design features that support health-enhancing behavior and community interaction, which includes physical living environment, social and human services, judicial and government services, security, transportation, information and communications technologies, etc. ▶ Calculate how long it would take to build the community. 	3, 5	2, 3, 5, 6, 7, 9	1, 4, 5, 8, 10, 11		5, 6, 8,



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Explain the interrelationship and impact of geography, human political systems, and environment in the creation of an underwater community. ▶ Identify likely sites. 			5, 8, 9, 14		
<ul style="list-style-type: none"> ▶ Compare life-support systems needed in an underwater community with space stations. ▶ Draw parallels and analogies. 		1	5, 9, 11, 12		5, 6, 8
<ul style="list-style-type: none"> ▶ Create a systemic solution to social and cultural problems of human interaction. 	1, 2	10	15		
<ul style="list-style-type: none"> ▶ List positions within career pathways that are essential to the newly established community. ▶ Create job descriptions and methods of attracting qualified applicants; obtain labor market information; and project growth rates for related careers. 	1, 2, 3, 5, 9	1, 2, 8, 10	9		6
<ul style="list-style-type: none"> ▶ Develop resumes and interview for identified positions. 	10, 11	8			
C. Reflection/Evaluation <ul style="list-style-type: none"> ▶ Design the underwater community. ▶ Construct a critical-process recording sheet that addresses necessary components in the design process, e.g., air, food, shelter, education, finance, transportation. ▶ Invite members of an architectural firm to judge the most aesthetic design. 		8	14, 15	5	7
D. Extension <ul style="list-style-type: none"> ▶ Take a virtual field trip to a different living environment. 		1	2		
<ul style="list-style-type: none"> ▶ Generate an architectural/blueprint format; build three-dimensional models of the communities. 	1, 3, 5, 7	1, 2, 9	15	9	4, 7

K-4

Statement E:

A public relations firm has been hired to develop and produce a documentary alerting young adults to the need for fiscal responsibility when using credit cards. As an employee you have been asked to develop a five-minute demo for the client.

Focus: Explore basic monetary principles and apply them in a classroom store.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.6, 4.8; Science 5.2, 5.8, 5.9; Social Studies 6.6; World Languages 7.1, 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: The student will

	List of CCWR Standards				
	1	2	3	4	5
▶ Create a visual design by rubbing crayons, chalk, or other media on paper over coins.		2	15		
▶ Create a collage or a bulletin board of objects that cost more than, less than, or the same as a given amount of money.	12		15		7
▶ Interview family member or a neighborhood friend about bank services and documents used in banking institutions. ▶ Share the information with classmates in an oral presentation.	12		3, 4		
▶ Compare information on various coins and currency from the U.S. and other countries. ▶ Design a coin or a paper bill for your school. ▶ Compare words for money and numbers in associated languages. ▶ Test coin composition and identify the metals used.	12	6	6, 7, 8, 12, 15	10	7
▶ Develop a game tossing coins to demonstrate force and motion as scientific principles.		2	15	11	6, 7
Continued on next page					



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> Combine coins and currencies to construct a three-dimensional structure. 			15		
<ul style="list-style-type: none"> Discuss, plan, and implement a fund-raising event to help a community organization or family. 	1, 3, 12	2	1, 13, 14	1, 2, 3, 6	7
<ul style="list-style-type: none"> Plan a field trip to a bank. Invite merchants and bankers to visit the classroom to discuss financial issues. 	1, 2, 3, 12	2	1, 13, 14	1, 2	7
<ul style="list-style-type: none"> Establish a class store and bank. Weekly “paychecks” are deposited into students’ “bank accounts”. Open an account (in a classroom bank) for depositing funds for later classroom activities. Design a system for rewarding/depositing weekly checks to buy items in the class store. Role-play consumers, merchants, and bankers. Create credit card/bank statements to monitor spending. Use credit cards or faux-money to buy items in the class store over a period of weeks. <p>Teacher Tip: <i>Grades K-2 can use pictorial representations; grades 3-4 students can develop actual accounting statements. Students in lower grades may operate a store, making simple change for purchases.</i></p>	1, 2, 3, 5, 12	2, 7, 8	15	1, 2, 7, 9	
<ul style="list-style-type: none"> Read Aesop’s <i>Fables</i>, e.g., <i>Ant and Grasshopper</i> (saving vs. squandering). 	12				
<ul style="list-style-type: none"> Create a class spending chart, graphing total spending and student debt. Discuss reasons why some students are in debt and why others have incurred no debt. 	12	8	3, 9, 10		
<ul style="list-style-type: none"> Deduce reasons for the overuse of credit cards. Create a poster/visual fostering fiscal responsibility. Videotape poster presentations to the class. 	12	2, 8, 9	9, 15	2	7

Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Write in a journal reactions to tasks for earning money, the amount of money earned, and feelings about system of earning money and ways of spending money.

12

10

- ▶ View and critique the video of one's own presentation.

9

10

3

- ▶ Debate whether credit cards will ever completely replace money.

12

1, 3, 8,
9, 11, 14

9

D. Extension

- ▶ Compose a public relations jingle encouraging fiscal responsibility.

12

15

- ▶ Mint faux-money and design credit cards.

2

15

7

- ▶ Investigate alternatives to monetary systems used in the past or internationally.

12

5, 6

5, 14

10



5-8

Statement E:

A public relations firm has been hired to develop and produce a documentary alerting young adults to the need for fiscal responsibility when using credit cards. As an employee you have been asked to develop a five-minute demo for the client.

Focus: Investigate and analyze the purpose, use, and impact of credit cards.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.2, 2.3; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.3, 4.5, 4.6, 4.8; Science 5.9; Social Studies 6.5, 6.6, 6.7; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
▶ Develop a vocabulary bank — e.g., fiscal, credit, interest rates.	12	6			
▶ Brainstorm problems related to the use of credit and credit cards. <i>Teacher Tip: Initial questions about the problem might include: 1) What is the value of having credit? 2) What would it be like not to have a credit card today? 3) How were credit cards first introduced?</i>	12	10	1, 3, 11		
▶ Propose solutions to these problems.					
▶ Investigate what happens to a person financially who is injured on the job and is unable to work.	12	5, 6	3, 5, 9, 14		8
▶ Hypothesize whether a person in this situation is more likely to have credit problems.					
▶ Identify what laws are in place to pay for medical treatment and compensate a person if he or she is injured and is unable to work.					
▶ Evaluate the effectiveness of Worker Compensation Laws in financially supporting workers who are partially or totally disabled.					

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Seek and bring in songs from various countries and eras with references to money. ▶ Analyze for meaning and historical context. 	12	5, 6	5, 12		
<ul style="list-style-type: none"> ▶ Use the Internet to download pictures of various coins and money from other countries. ▶ Bring in samples of coins from other countries. ▶ Practice buying objects using money from other countries. 	12	3, 5			
<ul style="list-style-type: none"> ▶ Design and construct a device that measures the speed and motion of a coin on a slope. 		7	15		7
<ul style="list-style-type: none"> ▶ Participate in <i>the Real Game</i> activities emphasizing budgeting. <i>Teacher Tip: Visit www.realgame.com.</i> 	3, 12		2, 11, 13	10	
<ul style="list-style-type: none"> ▶ Select a business and simulate the ups and downs of operation. 	3, 5, 12	1	5, 9, 12		
<ul style="list-style-type: none"> ▶ Invent a contract dividing profits fairly among business partners. 	12	2	15		
<ul style="list-style-type: none"> ▶ Select a high-end purchase (of interest to teens) and compare the total cost based on cash price vs. a credit purchase for a specified time. 	12	2	11, 12		
<ul style="list-style-type: none"> ▶ Interview individuals on their personal strategies for effective credit card usage. ▶ Create a visual representation that summarizes responses. ▶ Present to the class. 	12	9	3, 4, 15	9	7
<ul style="list-style-type: none"> ▶ Hypothesize the strategies that would be most effective for responsible use of credit cards. ▶ Check hypothesis by reviewing print and Internet resources. 	12	5, 6, 10	3, 10		
<ul style="list-style-type: none"> ▶ Develop a preliminary outline for the presentation on responsible credit card use. 	12	9	5, 15		
<ul style="list-style-type: none"> ▶ Videotape the presentations. 		2		2	4
<ul style="list-style-type: none"> ▶ Job shadow a person from banking, credit, or other financial department. 	2, 3, 7				7

Continued on next page



Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Develop a rubric and assess the videotape presentation.
- ▶ Present ideas for improvement.

- ▶ Keep a log of personal earnings/income/allowance and expenses during a defined time frame.
- ▶ Categorize expenditures and project a budget to allow for a special or unforeseen future purchase.

D. Extension

- ▶ Develop a budget for a single person, a family of two, and a family of four on a given salary.

Teacher Tip: Include information on savings and credit purchases.

- ▶ Develop a simulation for a bank/credit union where credit cards are issued to patrons/participants.
- ▶ Select bank loan officers and consumers.
- ▶ Issue credit cards, maintain credit card records, develop credit card billing system, outline opportunities for using the a credit card and make simulated purchases.
- ▶ Prepare monthly statements and collect faux payments.
- ▶ Develop methods for dealing with individuals who miss payments or default over time.

Teacher Tip: This activity may be linked to occupations and salaries in the Real Game.

1	2	3	4	5
	2	9, 14	4, 5	
12	2	8, 9, 12, 13		
12	2	4, 5, 12, 13, 14, 15	1	
1, 2, 3, 5, 12	7	1, 3, 8, 9, 11	6, 8	7

9-12

Statement E:

A public relations firm has been hired to develop and produce a documentary alerting young adults to the need for fiscal responsibility when using credit cards. As an employee you have been asked to develop a five-minute demo for the client.

Focus: Produce a five-minute documentary alerting peers to the value of exercising fiscal responsibility.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.4, 4.5, 4.6, 4.8, 4.14; Science; Social Studies 6.1, 6.3, 6.5, 6.6; World Languages 7.1, 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Contact a college representative to speak with classes about spending and credit card uses and abuses in college. 	12	10	3, 4, 5	1	
<ul style="list-style-type: none"> ▶ Invite banking representatives or people involved in the credit card industry to address the class about fiscal responsibility and the various strategies for managing money. ▶ Visit banking and credit departments of business organizations and shadow individual employees in those companies. 	2, 3, 7, 12		3, 4, 5	2	7
<ul style="list-style-type: none"> ▶ Obtain application forms for various credit cards and analyze the types of information requested. ▶ Examine the applications for similarities and differences. ▶ Present the findings to the class using a multimedia format. ▶ Complete a personal application. 	12	4, 5, 6, 8	5, 7, 9, 11		
<ul style="list-style-type: none"> ▶ Visit a local cable TV company to observe and discuss equipment operation and fiscal considerations as well as policies related to community service spots and programming. 	3	1	3		7



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Obtain information on the variety of career employment opportunities in the production industry. 	12	2	4, 5	1	
<ul style="list-style-type: none"> ▶ Prepare an imaginary budget on a daily, weekly, and annual basis to reflect the personal expenses of a young adult. 					
<ul style="list-style-type: none"> ▶ Contact one young adult in the United States and one in another country. ▶ Compare and reflect on the differences between their perceived and actual expenses. 	12	5	9, 10	1, 2	7
<ul style="list-style-type: none"> ▶ Investigate the projected costs of further education, including room, board, tuition, spending money, books, health and physical well-being, etc. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Develop a proposed budget or spending plan on an annual basis. 	12	4, 5, 6, 7	4, 5	1	
<ul style="list-style-type: none"> ▶ Explore various traditional and state-of-the-art payment and purchase methods. ▶ Compare the advantages and disadvantages of each. ▶ Identify the pitfalls inherent in each method. ▶ Calculate the impact of different interest rates on the balances remaining on credit cards or other time-purchase agreements. 	12	5, 6, 7	8, 9, 11, 12, 13		
<ul style="list-style-type: none"> ▶ Analyze a sample pay stub and draw conclusions about gross versus net pay. ▶ Investigate various withholdings and rates of deduction. ▶ Complete a sample W-4 form. ▶ Trace the history of business and personal taxation in the state and the nation. 	12	5, 6	12		
<ul style="list-style-type: none"> ▶ Investigate methods to protect personal income. ▶ Explain why saving is important. 	12	5, 6, 7, 10	4, 5		
<ul style="list-style-type: none"> ▶ Research and write a paper on a great entrepreneur in the state, country, or world. 		3	5, 8	10	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
▶ Investigate credit card theft and privacy issues.	12	6,10	5		
▶ Work in teams to develop possible scenarios for a five-minute documentary for peers on fiscal responsibility.	12	4, 6, 9, 10	4, 5, 8, 15	1, 2, 6, 8, 9	
▶ Include stories of young adults using and abusing credit cards.					
▶ Research statistics and information on teen spending and credit use as background information.					
▶ Work with cable company staff to identify the professional competencies necessary to produce an effective video.	1, 2, 3, 5, 7		3, 4, 5	2, 9	7
▶ Form teams with students assuming the professional roles (technicians, writers, performers, etc.) and produce the video.	3, 5, 8	8	15	1, 2, 9	4, 8
▶ Read and discuss <i>The Merchant of Venice</i> .	12		9	7	
▶ Role-play the following scenario: A bank loan officer needs to develop an evaluation tool for new customers requesting credit cards. The bank has experienced a 20% default rate on credit card payments. Currently there are 1,000 credit card holders.	3		3, 11, 15		
▶ Develop a plan for reviewing and approving or disapproving new credit card applications.					
C. Reflection/Evaluation					
▶ Write an essay describing a personal financial profile.	12	8	9	1	
▶ Explain any spending patterns that may be a problem.					
▶ Use various scenarios to demonstrate strategies young adults can employ to practice fiscal responsibility.	12		15	1, 8	
▶ Write a letter dealing with a credit bill problem.	12	8			
▶ Show the videos to focus groups to obtain feedback.		2	10	4, 5	
▶ Based on the feedback, analyze the videos for effectiveness.					
▶ Complete an internship with an employer who is in the field of banking and/or credit.	1, 2, 3, 4, 5, 6, 7, 8	7		3, 5, 7, 9	7



Sample Activities

List of CCWR Standards

D. Extension

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Compare cost, skills needed, and suitability of end product when buying a food item at a restaurant vs. the preparing the same food at home. 	12	2	9, 15		
<ul style="list-style-type: none"> ▶ Plan a healthy menu for a family of four for a week. ▶ Develop a shopping list and do comparative shopping at several food stores. 	12	4	4, 5, 9		
<ul style="list-style-type: none"> ▶ Investigate credit card use by employees in business. ▶ Compare similarities and differences in personal and business accounts. 	12	6	9		
<ul style="list-style-type: none"> ▶ Scrutinize laws related to consumer protection and relate them to a potential financial transaction for a teen. 	12	6	15		8
<ul style="list-style-type: none"> ▶ Write a column for the student newspaper on financial concerns and tips for teens. 	3, 8, 12	8	4, 5, 15	9	8
<ul style="list-style-type: none"> ▶ Research bankruptcy and its consequences in the personal and business world. 	12	5, 6, 7	4, 5, 14	10	
<ul style="list-style-type: none"> ▶ Create and complete a comparative study on an occupation and the related educational training to determine the dollar value of current schooling. 	7, 12	5, 6, 9	9, 12		

K-4

Statement F:

Mr./Ms. Z's company has decided to relocate the employee and the family overseas. The employment opportunities exist in Australia, Brazil, China, Kenya, and Switzerland. Your family must make the decision as to the country of preference with a backup alternative. Provide a justification to the human resource department. Be prepared to negotiate a contract that meets career, financial, and personal needs.

Focus: Compare and contrast several countries to select the country best suited for the family's relocation.

Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.2, 3.5; Mathematics 4.1; Science 5.7; Social Studies 6.4, 6.9; World Languages 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: The student will

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Research the United States and the five country choices including: climate in relation to health and comfort; customs and culture; weather, transportation; job opportunities; resources; housing; currency; language; etc. ▶ Design a table presenting the results of the research. <p>Teacher Tip: Depending upon grade level, the teacher can determine the level of complexity.</p>	6, 7, 8	1, 5, 8	10		
<ul style="list-style-type: none"> ▶ Draw a map showing the topography and location of the countries. 		8	5		
<ul style="list-style-type: none"> ▶ Create a master list comparing and contrasting each country and the United States. <p>Teacher Tip: Students in grades K-1 can use a pictograph, students in grades 3-4 can create actual lists.</p>		2	9		
<ul style="list-style-type: none"> ▶ Determine what constitutes a contract, methods of negotiating a contract, personal and financial needs related to a career, etc. 	12	5, 6	5		



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Break up into small “family” groups. Use the master list to determine the first- and second-choice country. 			8, 12, 14	2	
<ul style="list-style-type: none"> ▶ Make an oral/multimedia presentation (by “family” group) explaining why the first- and second-choice destinations were selected. 		8	15	2	
<ul style="list-style-type: none"> ▶ Use a simple teacher-created contract to clarify job tasks. <i>Teacher Tip: Depending upon grade level, the detail of the contract will vary. For grades K-1 the criteria can be represented in picture form.</i> 	3				
<ul style="list-style-type: none"> ▶ Read and discuss a story about a family’s move. ▶ Brainstorm a list of factors to be considered and decisions to be made in a move. Compare and contrast those factors and decisions in relation to a move out of the country. 		9, 12	9		
<ul style="list-style-type: none"> ▶ Read a story about a family in another country. ▶ Compare and contrast the lifestyle of the family with one in the United States. ▶ Visit the country (a virtual field trip) via the Internet. <i>Teacher Tip: Comparison of holidays may interest students.</i> 		5	5, 9, 12		
C. Reflection/Evaluation					
<ul style="list-style-type: none"> ▶ Conduct a peer evaluation of each group’s presentation. 				4, 5	
<ul style="list-style-type: none"> ▶ Conduct a self-evaluation: What would you do differently next time? 			10	3	
<ul style="list-style-type: none"> ▶ Write a persuasive paragraph or essay justifying the family’s decision to go to a certain country. 			10		
D. Extension					
<ul style="list-style-type: none"> ▶ Create resumes for each family member who is relocating with the employee, based on a list of available careers in each country of choice. 	9, 10	5, 6, 7	5, 8	1	

5-8

Statement F:

Mr./Ms. Z's company has decided to relocate the employee and the family overseas. The employment opportunities exist in Australia, Brazil, China, Kenya, and Switzerland. Your family must make the decision as to the country of preference with a backup alternative. Provide a justification to the human resource department. Be prepared to negotiate a contract that meets career, financial, and personal needs.

Focus: Use the decision-making process to relocate a family to an overseas location.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.3, 3.4; Mathematics 4.1, 4.3, 4.5, 4.7; Science 5.12; Social Studies 6.5, 6.9; World Languages 7.1, 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: The student will

		List of CCWR Standards				
		1	2	3	4	5
<ul style="list-style-type: none"> ▶ Research decision-making models and practice in given case situations. ▶ Divide into small family groups to determine the strategy to be used in making decisions about the impending move. 			5, 6, 7	1, 3, 5, 8, 12, 15	2, 10	
	<ul style="list-style-type: none"> ▶ Correspond with a student from one of the countries about family life, activities, school, and the cost of various items. ▶ Compare activities and costs with those in the United States. 	12	5, 6	3, 9		7
<ul style="list-style-type: none"> ▶ Use the Online Public Access Catalog and the Internet to research the countries and relevant demographic and statistical data such as housing, education, medical care, etc. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Take a virtual field trip to a country to explore its resources. 			3, 4, 6	5, 8, 9, 12		7
	<ul style="list-style-type: none"> ▶ Organize the data gathered using necessary software applications, such as Excel, Power Point, etc. 		2	8		



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Recommend the information that should be included in the contract with the company with regard to wages, travel expenses, benefits, etc. 	12	6	5, 10		
<ul style="list-style-type: none"> ▶ Discuss the subject of change. Include personal adjustments each family member would have to make. ▶ Develop strategies to help cope with change. 			3, 14		
<ul style="list-style-type: none"> ▶ Create a multimedia Power Point presentation that includes audio/video, graphs, charts, etc., and explains to the employer the reasons for choosing a particular country over the other options. 		9	13		
<ul style="list-style-type: none"> ▶ List short- and long-term career and family goals. ▶ Analyze those goals against the projected career move. 			14	1	
<ul style="list-style-type: none"> ▶ Change key concepts on the employee resume to the language of the selected country. 	10				
<ul style="list-style-type: none"> ▶ Contact two moving companies about the costs of moves across state lines, across the country, and to international locations. ▶ Analyze data and select the more cost-effective company. ▶ Explore how preparations for moves in the United States compare with those for moves to international locations. ▶ Diagram how movers pack various size boxes and protect breakable objects. ▶ Research a list of items not recommended for packing, storage, and transfer due to combustibility or other safety reasons. 	12	2, 7	12	10	8
<ul style="list-style-type: none"> ▶ Categorize personal and work items to take along in the move as “essential,” “nice to take,” and “not essential.” ▶ Determine and/or project the volume and weight of the items selected. 			8, 9		

List of CCWR Standards

1 2 3 4 5

- | | |
|-----------|------|
| 9, 10, 11 | 2, 9 |
| 14 | |

1 2 3 4 5

- | | | | | |
|------------|---|----|--|--|
| | 2 | 2 | | |
| 5, 10 | 2 | | | |
| 1, 2, 3, 5 | 8 | 15 | | |



9-12

Statement F:

Mr./Ms. Z's company has decided to relocate the employee and the family overseas. The employment opportunities exist in Australia, Brazil, China, Kenya, and Switzerland. Your family must make the decision as to the country of preference with a backup alternative. Provide a justification to the human resource department. Be prepared to negotiate a contract that meets career, financial, and personal needs.

Focus: Mr./Ms. Z is interested in employment in a company with employment opportunities overseas. Mr./Ms. Z must apply to human resources for one specific site.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.5, 4.7; Science 5.10, 5.12; Social Studies 6.1, 6.3, 6.4, 6.5, 6.6, 6.7; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: The student will

- ▶ Research international companies.
- ▶ Include policies and procedures related to employment and transfer to other companies as well as the job titles available and job descriptions.
- ▶ Create a database illustrating the information.
- ▶ Analyze the data and compare it with personal skills and abilities.
- ▶ Compare and contrast the occupational safety and health worker-protection laws in the different countries.
- ▶ Take a virtual field trip to explore the companies' production facilities and procedures.
- ▶ Investigate the language, climate, religion, education/schools, housing, cost of living, government, history, culture, transportation, currency (rate of exchange), customs, crime rate, and health and safety issues.

1	2	3	4	5
1, 2, 5, 7, 9	3, 4, 6, 7,	5, 8, 9, 12		8
12	5, 6, 7, 9	5, 11, 12	6	

Continued on next page

Sample Activities

List of CCWR Standards

- ▶ Draw conclusions about living and working in that country.
- ▶ Evaluate the quality of air and water in the different countries and assess if they represent a health risk to the citizens.
- ▶ Quantify comparisons of some findings.
- ▶ Design a brochure that the company could use in recruiting employees to various international sites.

Teacher Tip: Visit a travel agency and pick up brochures on countries. This is an opportunity for students to fully explore the art and culture of the country.

- ▶ Decide which company and location meet their career and life goals.

- ▶ Prepare a resume, complete an application and role play an interview for that position.
- ▶ Negotiate a contract for a specific site/position.

- ▶ Develop a dictionary of phrases in the language used in the country selected; select phrases that may be used in employment and living situations.

- ▶ Analyze labor market information available through the Internet.

- ▶ Project an annual budget based on salary and expenses for work and personal living.
- ▶ Analyze the data in a spreadsheet program using algebraic formulas.

- ▶ Research travel plans. Include citizenship laws, passports and visas, immigration laws and procedures, and immunization requirements.
- ▶ Diagram a variety of possible routes and determine the shortest.

- ▶ Write a persuasive letter to family and/or friends explaining the merits of the company and location.

1	2	3	4	5
		13, 14	1	
10, 11	8	13	9	
11	5, 6, 8	5		
9	5, 6	8, 12		7
12	4, 5, 6	10	1	
	5, 6	5	10	
	2			



Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Develop a rubric for assessing resumes, applications and interviews.
- ▶ Implement use of rubrics through peer assessment.

D. Extension

- ▶ Create a menu in English and one other language for the employee cafeteria.
- ▶ Divide into teams and travel to another country for three weeks to negotiate a contract.
- ▶ Identify major cultural differences that will influence the ability to complete the negotiations, for example, the roles of women, minorities, and other groups.
Explore the impact of doing business in a country with a different culture.
- ▶ Prepare a business dinner and simulate cultural customs as part of the investigation.
- ▶ Analyze cultural influences on conducting business in other countries.

1	2	3	4	5
	2	8	4, 5	
	5, 6, 8	5, 15		
2, 5	2	1, 3, 5, 8, 9	2, 6, 7, 8	6, 7, 8, 9

K-4

Statement G:

The town has decided to build a new school. Research, design and estimate costs for a model school. Prepare a presentation to convince the local board of education.

Focus: Investigate the components of a school facility and create a model of the ideal school.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.1, 2.3, 2.6; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.3, 4.5, 4.6, 4.7, 4.8, 4.9; Science 5.2, 5.6, 5.7; Social Studies 6.7, 6.9; World Languages 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Read a story about a child going to school in another country. ▶ Compare the experiences of that child with their own. ▶ Visually represent the similarities and differences. <p>Teacher Tip: <i>Provide a bibliography of stories for students to select.</i></p>			2, 4, 9, 12		
<ul style="list-style-type: none"> ▶ Participate in an in-school field trip to map the school and its grounds. ▶ Label the different uses for each area. 			7, 9	2	
<ul style="list-style-type: none"> ▶ List the different needs and wants as related to a school. <p>Teacher Tip: <i>Differences between needs and wants will vary; e.g., a media center is a need for some and a want for others.</i></p>			3	1	
<ul style="list-style-type: none"> ▶ List the uses of various rooms and spaces within the school facility. ▶ Analyze the effectiveness of the utilization. ▶ Propose changes. 			3, 12		
<ul style="list-style-type: none"> ▶ Critique the landscaping of the school. ▶ Research plants and conditions for maximum growth in the location. 	3, 5, 7, 8	2, 6, 8	4, 8, 13, 15	1, 2, 9	4, 7

Continued on next page



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Propose recommendations for beautifying the grounds. ▶ Present them to the principal. ▶ Develop a plan for securing materials, tools and plants. ▶ Plant and maintain the plants identified in the beautification plan. ▶ Donate plants to a community site that needs beautification. 					
<ul style="list-style-type: none"> ▶ Plan and take a field trip to a nursery. ▶ Invite a horticulturist to speak to children about plants and landscapes. 	3	2	4	1, 2	7
<ul style="list-style-type: none"> ▶ Survey the school on the types of employment opportunities, tasks performed by workers, and space or facility requirements to complete tasks. ▶ Analyze the survey results to determine the minimum required facilities in a school. <p>Teacher Tip: Include maintenance, office, nurse, gym, cafeteria, architecture, landscaper, etc.</p>	3	3, 6, 7, 9	3, 4, 8, 12, 14	2	7
<ul style="list-style-type: none"> ▶ Plan a fitness program for elementary students. ▶ Identify the necessary equipment and design a storage area for the items. 	3	2, 6	3, 4, 5, 15	10	1, 2, 5, 6, 8, 9
<ul style="list-style-type: none"> ▶ Use technology and community resources to research various structural and safety issues: heating, lighting, placement of electric outlets, fire exits, etc. ▶ Discuss safety and health features needed in a school. ▶ Develop an inventory list of safety features for the school. ▶ Determine the necessary items for a well-stocked first aid kit. 	3	1, 2, 3, 6	4, 5	6, 7, 8	
<ul style="list-style-type: none"> ▶ Brainstorm symbols that might be used to represent doors, windows, lights and other architectural features. ▶ Draw some sample illustrations. ▶ Compare the illustrations with those actually used by architects. 	3	2	9, 12	9	
<ul style="list-style-type: none"> ▶ Use a sample floor plan and measure the size of spaces. ▶ Discuss the need for scale measurements. ▶ Practice various math scenarios for measuring inches, feet, and yards. 	7	2	3, 9, 12		

Sample Activities

List of CCWR Standards

- ▶ Use multimedia resources to draw a floor plan or build a 3-D model of the ideal school.
- ▶ Information from their research needs to be incorporated.
Teacher Tip: Recommend using cooperative groups.
The teacher may use one classroom instead of the entire school for the early grades.

- ▶ Make an oral presentation describing the model and giving rationale for the choices.

- ▶ Display models and written presentations in a school showcase for board of education and community viewing.
- ▶ Present designs to school principal and/or PTA members.

C. Reflection/Evaluation

- ▶ Maintain a journal recording feelings and the reasons for maintaining and improving playground and recreational facilities at a school site.
- ▶ Use a rubric to evaluate group models and oral presentations.

D. Extension

- ▶ Present group models to the school facility planner for feedback and discussion.
- ▶ Create a portfolio of materials developed to be shared with the administration and architects.

1	2	3	4	5
3, 8	2, 3, 8	15	2, 10	7
1	9	10, 14	4, 5	
1, 8	9		2, 9	7
		3, 10	3	
		14	3, 4, 5	
1, 8	9	10	3, 4, 9	
1	2, 9	2	11	



5-8

Statement G:

The town has decided to build a new school. Research, design and estimate costs for a model school. Prepare a presentation to convince the local board of education.

Focus: Using architectural requirements and legal building codes, design blueprints or CAD representations for a model school.

Links to Other Standards: Arts (Visual and Performing) 1.2–1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.5 4.6, 4.7, 4.9; Science 5.10; Social Studies 6.4, 6.6, 6.7; World Languages 7.1

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Learn how to read an architectural blueprint. ▶ Analyze and discuss the blueprint for current use of space. ▶ Survey school staff and the community to include their needs, wants, concerns, etc. ▶ Set a long-term goal to design a new facility. ▶ Set short-term goals to modify the current facility. 	3	2, 6	1, 3, 4, 8, 12	1	
<ul style="list-style-type: none"> ▶ Research federal, state, and local requirements and building codes related to safety, health, space usage, etc. ▶ Investigate how much outside air is needed for each room in the school to ensure good ventilation and proper air quality. 		3, 6	4, 5		6, 8
<ul style="list-style-type: none"> ▶ Research and make local contacts to identify the stages of building design and construction. ▶ Interview individuals regarding career preparation in these fields. 	3, 5, 7	6	3, 4, 5	2, 6, 11	7
<ul style="list-style-type: none"> ▶ Measure four different types of rooms in a school building and draw the rooms to scale. ▶ Use furniture templates and arrange furniture in the rooms. ▶ Draw an elevation that includes a color rendition. 	3	2, 9	15		

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Estimate the furniture and technology needs the rooms within the proposed facility. ▶ Based on quantity and specification estimates, construct a proposed budget using at least two different vendors. ▶ Include transportation and shipping or other associated costs. ▶ Recommend and defend issuing a contract to one of the vendors. 	3, 12	1, 2, 5	4, 5, 9, 10, 12, 15		7
<ul style="list-style-type: none"> ▶ Develop a bulletin board using architectural-symbols. 		2, 8	15		7
<ul style="list-style-type: none"> ▶ Work in groups to design a model school. ▶ Chose the traditional drafted blueprint, a 3-D model, and/or CAD program for the presentation. ▶ Incorporate the building safety and code requirements researched earlier. <p>Teacher Tip: Design a model using metric measure.</p>	3	2, 9	15	2	7
<ul style="list-style-type: none"> ▶ Research and recommend materials and assembly methods for constructing the school. ▶ Create guidelines for purchasing materials to construct the new school that will minimize chemical emissions into the air inside the school and help prevent indoor air-quality problems. ▶ Explore the effect of local weather systems on these materials. ▶ Defend the recommendation. 	3	5, 6, 7	5, 8, 10, 11, 13		6
<ul style="list-style-type: none"> ▶ Identify local contractors. ▶ Contact the Better Business Bureau to check the companies' service records and customer complaints. 	2, 12	6, 7	3, 4, 5, 8	11	
<ul style="list-style-type: none"> ▶ Present a multimedia proposal to peers. ▶ Complete evaluations based on the merits of each proposal and design. ▶ Convene a group of adults to serve as a jury. 	1	9	4	3, 4 ,5, 11	
<ul style="list-style-type: none"> ▶ Job shadow people in positions related to architecture, design, landscaping, construction, contracting, etc. <p><i>Continued on next page</i></p>	1, 2, 3, 5, 7	1	10	2, 9	7



Sample Activities

List of CCWR Standards

	1	2	3	4	5
Teacher Tip: Be sure students observe work only. Child Labor Law prohibits student participation in hazardous occupations.					
C. Reflection/Evaluation					
▶ Conduct a peer evaluation of each proposal using rubrics to evaluate the actual design and the presentation itself.			7, 10	3, 4, 5	
▶ Self-assess group and individual participation in the project.			10	3	
▶ Use a journal to record reactions to the job-shadowing experience.	2, 3, 5, 7		10	3	
▶ Include likes and dislikes in the narrative description.					
D. Extension					
▶ Display the models for school and community viewing.		2			
▶ Write a press release announcing the completion of the models for the new school.	12	2, 8	4, 8		7
▶ Send the press release to the editors of the local paper.					
▶ Track the columns and inches that are actually published.					
▶ Analyze the factors that led to acceptance by the editor.					
▶ Compare the costs of public service announcements and purchased space.					
▶ Write a description of the new school and send it to a pen pal/foreign exchange student.		2, 7			7
Teacher Tip: Use the native language of the recipient.					
▶ Research various furniture styles and historical perspectives.		5, 6	9		
▶ Discuss international influences on interior design.					
▶ Create a portfolio of designs to be presented to the architect addressing the best features for the new school.	1	2, 9	2	11	
▶ Plan and take a field trip to stores or museums that supply furniture.		2		1, 2	7

9-12

Statement G:

The town has decided to build a new school. Research, design and estimate costs for a model school. Prepare a presentation to convince the local board of education.

Focus: Simulate the occupational roles of individuals involved in the design and construction process of a new school building.

Links to Other Standards: Arts (Visual and Performing) 1.1–1.6; Comprehensive Health and Physical Education 2.1, 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.7, 4.8, 4.10; Science 5.2, 5.9; Social Studies 6.1, 6.5, 6.6; World Languages 7.1

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

	List of CCWR Standards				
	1	2	3	4	5
▶ Brainstorm the types of occupations directly related to the task with which the town has challenged the class.	3			9	
▶ Survey students to identify related career interests, abilities, and skills and to help them divide into cooperative groups according to clustered disciplines/career pathways.	2, 3, 6		3, 8, 9	2, 9	
▶ Prepare resumes and apply and interview for positions on the student teams. Teacher Tip: <i>Working teams can then be assembled based on individual talents and potential contributions.</i>	10, 11	2, 8	8, 10	1, 3, 9, 11	
▶ Research licensing, bonding, and labor organizations in the construction industry.		5, 6	3, 4, 5, 9	10	2, 9
▶ Investigate provisions that can be added to the contract to help ensure the workers are protected from occupational safety and health illnesses and injuries.					
▶ Compare the number of injuries and illnesses that occur in the construction industry with the number that occur in other types of industries.					
▶ Explain why some industries have more injuries and illnesses than others.					



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Contact local professionals in the fields of public relations, architecture, construction, interior design, etc., to arrange for meetings and mentoring of student teams. ▶ Include discussion of employability skills, appropriate career majors, academic and occupational skills, and local volunteer opportunities. 	2, 3, 4, 5, 6, 7, 9	2	3, 4, 8, 10	9	7
<ul style="list-style-type: none"> ▶ Research state and local requirements for facility planning of schools. ▶ Include information on design requirements and bidding processes. 	12	5, 6	4, 5		8
<ul style="list-style-type: none"> ▶ Contact several construction companies and ask their personnel to mentor students in estimating the costs of the building based on materials, labor, etc. Compare company estimates for the various designs. Analyze why some designs are more or less expensive. 	12	6	3, 9, 12	9	7
<ul style="list-style-type: none"> ▶ Explore financing options. Include information on tax and interest rates, bonds, etc. ▶ Debate selected options and come to consensus on a recommendation. 	12	2, 5, 6	8, 10	9	
<ul style="list-style-type: none"> ▶ Identify and access other community resources and sources of information that might be used to formulate design ideas. 		5, 6	4, 5		
<ul style="list-style-type: none"> ▶ Research lighting, floor coverings, plumbing fixtures, etc. ▶ Select appropriate materials for the group design. 		1, 6	4, 5, 15		
<ul style="list-style-type: none"> ▶ Plan and conduct experiments on types of lighting, wattage, and types of bulbs and the ease of completing tasks in school. ▶ Design an ideal source of light. 		8	6, 7, 15		4, 6, 7
<ul style="list-style-type: none"> ▶ Develop preliminary designs for the multimedia presentations and 3D model of the building and site. 	3	2, 8	15		
<ul style="list-style-type: none"> ▶ Present designs to the board or other community group for assessment and discussion of the feasibility of construction in the community. 	2	9		9	7

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Relate site development to overall community development and environmental preservation. 			14		
<ul style="list-style-type: none"> ▶ Design a unique student desk or chair for a school. ▶ Hold a competition to determine the most unique and/or ergonomic design. ▶ Include an engineer or architect on the evaluation team. ▶ Determine the cost to manufacture the desk or chair and the selling price. ▶ Investigate obsolescence factors in the design. 	2, 3, 12	1, 2, 9	15	11	1, 6, 7
<ul style="list-style-type: none"> ▶ Research unique and/or controversial architecture throughout the world. ▶ Write an explanation in the language of the country. 		5, 6	4, 5		
<ul style="list-style-type: none"> ▶ Participate in a cooperative education or an apprenticeship structured learning experience at a construction site. ▶ Practice injury prevention. ▶ Manage crisis and stressful situations to maintain physical and mental health. 	1, 2, 3, 6, 8		10	2, 3, 11	1, 3, 4, 7, 9
<ul style="list-style-type: none"> ▶ Prepare a resume for construction employment in another country. 	10	8		11	
C. Reflection/Evaluation					
<ul style="list-style-type: none"> ▶ Conduct a peer evaluation of each proposal using rubrics to evaluate the design, the presentation, and the models. ▶ Conduct self-assessments of participation in the project. 			10	3, 4, 5	
D. Extension					
<ul style="list-style-type: none"> ▶ Display models for school and community viewing. 		2			7
<ul style="list-style-type: none"> ▶ Write a press release describing the project designs. 		2			



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Project operating costs for the gymnasium and/or the auditorium. ▶ Analyze the data in a spreadsheet program using algebraic formulas. ▶ Determine a facility use price to ensure proper maintenance and overhead. 	12	4, 5, 6	3, 4, 5		
▶ Create a color and elevation portfolio for the school.		8	15		
▶ Plan and take a field trip to a business that uses CAD programs in design.	3	2		1, 2	7
▶ Create a portfolio of designs addressing the best features of the new school.	1	2, 9	2	11	

K-4

Statement H:

Earth is becoming uninhabitable.

Focus: Develop and create alternative habitats in order to survive in outer space. Space stations and other planetary habitats need to be explored.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.1, 2.4, 2.5; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.7, 4.11; Science 5.1, 5.2, 5.3, 5.5, 5.6, 5.8, 5.9, 5.11, 5.12; Social Studies 6.1, 6.5; World Languages 7.1

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: The student will

	1	2	3	4	5
<ul style="list-style-type: none"> View and discuss a movie or read a book about the solar system such as <i>The Magic School Bus in the Solar System</i>. 			5		
<ul style="list-style-type: none"> List items essential for sustaining life, e.g., air, water, food, and shelter. 			2, 3		
<ul style="list-style-type: none"> Research facts about each planet using library media resources. Compare and contrast the environments of each planet. Draw conclusions about which planets can support life. 		5, 6	5, 9, 12, 13	10	
<ul style="list-style-type: none"> Discuss the pros and cons of establishing a colony on selected planets. Chart such items as temperature, distance from the earth, space, etc. 		2	8, 9		
<ul style="list-style-type: none"> Research NASA's program of space exploration and the role of the government in the program. Send a letter to NASA by e-mail or surface mail. 	3	5, 6	5		8
<ul style="list-style-type: none"> Develop a map that depicts all countries that have space exploration programs. Compare reasons that countries began and continue to maintain space exploration programs. 		2, 8	5, 9, 12		



Sample Activities

List of CCWR Standards

	1	2	3	4	5
▶ Using pictures, drawings, or other visuals, create a story line describing events related to space travel.		2, 8	5, 9, 12		
▶ Investigate careers in astronomy, the aerospace industry and related fields.	3, 5	6	5		
▶ Develop a list of jobs needed to build a space station and to sustain a planet colony.	3, 5	6, 7	5		6
▶ Design a space station or planet colony. ▶ Build a model of the habitat.	3	2, 8	15		7
▶ Select a role from the list of jobs. Create and present a multimedia presentation about the colony/space station. ▶ Role play positions such as astronaut, colony scientist, space station designer, etc.	2, 3, 5, 19	9	15	11	
▶ Create a cartoon showing your life on the job or as a family member for a day.				7	
▶ Plan and/or conduct experiments on space-related concepts such as gravity, weightlessness, nutrition and digestion, fitness, etc.			6, 7		4, 7
▶ Plan and take a virtual field trip to NASA in Florida.	3	5, 6, 7			
C. Reflection/Evaluation					
▶ Complete a rubric evaluation of the colony.			10	3	
▶ Write a story about life on another planet based on what was learned.		8	10		
D. Extension					
▶ Use the Internet to communicate with a person in a career related to space exploration.	3	5, 6			7

5-8

Statement H:

Earth is becoming uninhabitable.

Focus: Earth's resources are rapidly being depleted. An expedition to Mars revealed potential raw materials. Devise a plan for securing and transporting the raw materials from Mars to Earth. The plan must be submitted for government approval.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.5, 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.6; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.5, 4.7, 4.14; Science 5.1, 5.2, 5.3, 5.4, 5.5, 5.9, 5.10, 5.11; Social Studies 6.1, 6.2, 6.4, 6.9; World Languages 7.1

Sample Activities

A. Preparation: (See page 6-2)

B. Action: The student will

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> Define and explain what a corporation is and why it is established. 		6			
<ul style="list-style-type: none"> Locate and interview people with expertise in establishing a corporation, such as local chamber of commerce members, financial officers for banks, lawyers, etc. 	3, 5, 7	2	3, 4, 8		7
<ul style="list-style-type: none"> Divide into groups and select a role in the corporation. Write a job description for each role in the company. Justify how that role contributes to the entire project. 	2, 3	2	1, 8, 10	2	
<ul style="list-style-type: none"> Access information on the Internet and in print that explains how raw materials are obtained and refined. Define for each group the raw material to be obtained from Mars and the material's characteristics. Calibrate a scale that accurately measures the amount of raw material taking into account the difference in gravity on Mars. Draw conclusions about the best existing methods for extracting the material and suggest new ones based on background information about Mars. Design and manufacture a device for extracting the raw material. 	3	1, 5, 6, 10	15	10	7

Continued on next page



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Design a container for shipping of the raw material in the space ship. <p>Teacher Tip: The NASA web site (www.nasa.gov) contains information that might be useful.</p>					
<ul style="list-style-type: none"> ▶ Research living conditions on Mars and determine how the corporation will provide a safe habitat in this environment. ▶ Design the habitat for the workers and develop a database of materials needed for survival, e.g., food, water, oxygen source. ▶ Plan for fitness, emotional well-being, and recreational activities such as music and dance. ▶ Design a travel recruitment piece to entice workers to go to Mars. <p>Teacher Tip: Make recruitment posters in different languages.</p>	3	1, 2, 5, 8	15	10	6, 8
<ul style="list-style-type: none"> ▶ Propose and demonstrate a method for simulating movement and various activities on Mars. ▶ Hypothesize the effects of gravity on various body systems. ▶ Design a fitness plan to ensure muscle tone and fitness. 		8	3		1, 3, 8
<ul style="list-style-type: none"> ▶ Investigate the influence of imaginary space travel on art, movies, and other media productions. ▶ Complete a comparative analysis of imaginary space travel to reality. 		5, 6	5, 9, 12		
<ul style="list-style-type: none"> ▶ Propose a system for extracting and transporting the raw material to earth. 		1, 2	15		
<ul style="list-style-type: none"> ▶ Prepare a written proposal detailing the plan for government approval. ▶ Develop a multimedia presentation to persuade an audience. 		2, 9	15		
<p>C. Reflection/Evaluation</p> <ul style="list-style-type: none"> ▶ Present the formal proposals by each company to the “government.” 		9			
<ul style="list-style-type: none"> ▶ Ask an engineer to provide feedback on the designs for equipment and living facilities. 			4	4	7

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> Hypothesize the differences in everyday living activities when a long period is spent on another planet. 			3		
D. Extension					
<ul style="list-style-type: none"> Construct a model of the proposed living accommodations for the Mars colony. 	3	8	15		4, 7
<ul style="list-style-type: none"> Relate the theme to current problems on Earth and propose solutions. Devise a new garment or product that solved one of the current problems on Earth. Test the item for feasibility in use and production. Determine a test market site. Conduct a public survey of consumers at the market site to determine if consumers would buy the item and the amount they would be willing to pay. Compare with production costs to determine feasibility of production. 	3, 12	8, 10	9, 13, 15	1	7
<ul style="list-style-type: none"> Research the impact of a new corporation of this kind on a community in the United States. 		5, 6	4, 5		
<ul style="list-style-type: none"> Investigate the Challenger explosion and why it happened. Hypothesize what implications this accident has for building a habitat on Mars and for transporting people and materials between Mars and Earth. 		5, 6, 10	3, 5, 8		1, 6, 8
<ul style="list-style-type: none"> Expand the search for resources to other planets and/or natural satellites in our solar system. Research the geophysical aspects of the specific body in space and project how the “corporation” could work there. 		5, 6	3, 5		
<ul style="list-style-type: none"> Research the clothing and protective equipment needs of space travelers. Develop improvements on existing space suits and equipment. 		5, 6	15		5
<ul style="list-style-type: none"> Research and participate in the Mars Millennium project. <p>Teacher Tip: Visit www.mars2030.net.</p>		5, 6	5	2	7



9-12

Statement H:

Earth is becoming uninhabitable.

Focus: A previous expedition to Mars has identified and created a highly successful mining operation that has resulted in an unprecedented economic windfall on Earth. Develop a plan for donating money to a nonprofit organization.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.5, 4.6, 4.9, 4.10, 4.12; Science; 5.1, 5.2, 5.5, 5.7; Social Studies 6.3, 6.4, 6.5, 6.6, 6.8, 6.9; World Languages 7.1

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: The student will

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Research the names and functions of nonprofit organizations. ▶ Summarize information using a database format. ▶ Include information on the fiscal assets of the group. 	12	3, 5	3, 5, 8		7
<ul style="list-style-type: none"> ▶ Investigate the procedures for establishing a nonprofit organization. ▶ Compare the procedures with those for establishing a for-profit organization. 		6	5, 8, 9, 12		
<ul style="list-style-type: none"> ▶ Divide into teams. ▶ One team represents the company who has the accumulated wealth to be distributed to a nonprofit organization. ▶ Other teams are formed to represent nonprofit organizations. ▶ The company team develops a request for proposals from nonprofit organizations that outlines the requirements to receive funding. ▶ The nonprofit organizations are required to identify their name and purpose and to develop the application to receive funds. ▶ The company team reviews applications and holds interviews as necessary. <p>Teacher Tip: The amount of money to be used should be defined (e.g., \$1,000,000).</p>	1, 2, 3, 5, 12	2, 8	1, 3, 5, 8, 13, 14	1, 2, 6, 8, 9	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Hypothesize the results of increased wealth on the services delivered to the clients of nonprofit organizations. ▶ Display the results through charts and graphs. ▶ Predict trends of distribution of services based on geographic location. ▶ Analyze the data in a spreadsheet program using algebraic formulas. 		2, 4	3		
<ul style="list-style-type: none"> ▶ Research the role of the United Nations in global economics, including the provision of goods and services to countries throughout the world. ▶ Compare and contrast the functions of the United Nations and nonprofit groups in the United States. 		5, 6, 7	3, 5, 9, 12		
<ul style="list-style-type: none"> ▶ Create an original artistic (visual and/or performing) representation of the mission of a nonprofit group. 		2, 9	15		
<ul style="list-style-type: none"> ▶ Discuss the opportunities and difficulties of communicating in a highly technological society for a group that is nonprofit. ▶ Discuss the images portrayed or projected. 		10	3, 9		
<ul style="list-style-type: none"> ▶ Identify the roles and responsibilities of United Nations representatives in this process. ▶ Brainstorm ways that multilingual communication skills influence job success. ▶ Assess one's own qualifications and interests. ▶ Job shadow or volunteer in a related position with a nonprofit group. <p>Teacher Tip: Use the Internet to correspond with a United Nations representative(www.undcp.or.at/unlinks.html).</p>	1, 2, 3, 5, 6, 7, 8	2	5, 10	3, 9	7
<ul style="list-style-type: none"> ▶ Plan and take a trip to the United Nations in New York City. ▶ Prepare potential questions to ask guides for tours in at least one other language. ▶ Identify possible careers and transferable skills. 	3, 5, 6		3		



Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Debate the pros and cons of forming an organization for profit vs. nonprofit.

- ▶ Interview a person in a nonprofit group such as the Peace Corps.
- ▶ Write a reaction paper and incorporate personal feelings about future participation in such activities.

D. Extension

- ▶ Research organizations that provide assistance to people in other countries.
- ▶ Chart the percentage of contributions reaching people in need.
- ▶ Compare resource distribution that actually reaches the people with the portion retained by governments.

- ▶ Model distribution of food throughout the world.
- ▶ Discuss feelings about a country or section of the world with few resources for food distribution but large population demand.

- ▶ Participate in a UNICEF community-service event.

- ▶ Plan and implement a charitable campaign for a needy family or group in the community.
- ▶ Develop accompanying campaign visuals.

1	2	3	4	5
12		1, 8		
		3, 10	1, 2, 6, 9	7
	2, 5, 6	5, 9, 12	10	
	2	2, 10		
1, 5, 8	2		2, 9, 11	3, 7
1, 5, 8	2, 8	15	2, 9, 11	3, 7

K-4

Statement I:

An individual wants to select a career pathway (Arts and Humanities; Health and Human Services; Mathematics, and Technology; and Business and Information) in an area of interest for future employment and postsecondary and lifelong learning.

Focus: Investigate a variety of career pathways based on individual interests.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1, 3.2, 3.3, 3.4, 3.5; Mathematics 4.1, 4.5, 4.6, 4.14; Science 5.2; Social Studies 6.4, 6.5; World Languages 7.1

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

	List of CCWR Standards				
	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Complete interest inventories and make a collage showing areas of interest. ▶ Label the collage using vocabulary in several languages. 	3	2, 6, 8	1, 4, 5		6
<ul style="list-style-type: none"> ▶ Interview people in any of the career pathways on the duties and tasks associated with the job. ▶ Investigate educational preparation and health and safety concerns for the pathway. ▶ Compare student interest areas to the career pathway. 	2, 3, 7	2, 5, 6	3, 4, 9	9, 10	7, 8
<ul style="list-style-type: none"> ▶ Divide into groups and work with the library media specialist to find books and stories about people on the job. ▶ Read the books and do an oral report of the careers described. ▶ Classify each job described into one of the four career pathways. ▶ Draw a person in sample careers. ▶ Assess other presentations. <p>Teacher Tip: <i>Presentations to the class might include an overview of occupations, employment opportunities, education necessary, safety, etc., for each pathway.</i></p>	3	6	4, 5,	4, 5	



Sample Activities

List of CCWR Standards

	1	2	3	4	5
▶ Create clocks to tell the time that people start to work.	1	2			
▶ Read and discuss <i>Oh, the Places You'll Go</i> by Dr. Seuss.	5				
▶ Invite speakers/parents to make presentations on each pathway. ▶ Investigate pathways of potential speakers before they present.	2, 3, 5, 7	6	3, 4, 5	9	
▶ Sort clothing, tools, products, etc., into career pathway categories. ▶ Hypothesize which clothing protects workers.			3, 9		1, 2, 5, 6, 8
▶ Participate in a career dress-up day. ▶ Make and wear a hat depicting a career. ▶ Hold a hat day. ▶ Label clothing in different languages. Teacher Tip: Have some clothing/costumes available that can be used by the students.		2	15	6	
▶ Ask questions of parents, neighbors, and other acquaintances concerning their work, duties, responsibilities, likes/dislikes, educational training, hours, and any accidents or health problems related to their work. ▶ Summarize findings. ▶ Prepare a chart showing the number of hours worked daily, weekly and yearly. ▶ Develop another chart depicting the number of vacation days and holidays. ▶ Compare charts with those of classmates. ▶ Use another language to depict the same information.	2, 3, 7	8	3, 4, 8, 9, 10 12	9	6, 7, 8
▶ Participate in field trips to neighborhood business/industry sites. Teacher Tip: Develop questions and ideas for observation and safety as a class.	3, 5, 7		3, 7	2, 6, 9	6, 7, 8
C. Reflection/Evaluation					
▶ Establish a school post office with students at various grades holding jobs for the post office.	1, 2, 3, 7, 10, 11	2	4, 15	1, 2, 9, 11	7, 8
▶ Develop a newsletter about career options and events in the school.	3, 5	3, 8	4, 15	1, 2, 9, 10	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Give an oral report to the class on experiences and feelings while role-playing the job. ▶ Evaluate with student/teacher-created rubrics. 			10	4, 5, 6	
D. Extension					
<ul style="list-style-type: none"> ▶ Make presentations to a PTA meeting. 	2	9		9	
<ul style="list-style-type: none"> ▶ Make presentations to another class. 	2	9		9	
<ul style="list-style-type: none"> ▶ Prepare a school bulletin board. 	2,8	15		7	



5-8

Statement I:

An individual wants to select a career pathway (Arts and Humanities; Health and Human Services; Mathematics, and Technology; and Business and Information) in an area of interest for future employment and postsecondary and lifelong learning.

Focus: Participate in a variety of activities to explore possible career pathways.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.6; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.11, 4.12; Science 5.2; Social Studies 6.1, 6.6; World Languages 7.1

Sample Activities**List of CCWR Standards**

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Complete an interest inventory or revisit previous interest inventories from the student portfolio. ▶ Write an autobiography that describes personal qualities and interpersonal skills, keeping in mind personal health, fitness, safety, and ability to complete tasks. 	2, 3, 5	2	8, 10		
<ul style="list-style-type: none"> ▶ Job shadow a person in a career pathway of interest. ▶ Investigate child labor laws. ▶ Discuss why these laws are needed. ▶ Participate in a “take your child to work day.” ▶ Complete a questionnaire. ▶ Make a presentation to the class about the highlights of the day. 	2, 3, 4, 5, 6		8, 10	6, 9, 11	6, 7
<ul style="list-style-type: none"> ▶ Complete a hands-on project that involves skill development related to a career pathway choice: prepare food as a chef; plan and conduct an experiment as a scientist, design/build an object as an architect or engineer; analyze data in a spreadsheet program using algebraic formulas as an accountant, etc. Peers evaluate the project. 	1, 2, 3, 5, 6	2, 4, 8	15	1, 4, 5	7

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Volunteer or participate in a community-service activity associated with a career pathway. ▶ Participate as an interpreter in a community organization where these services might be needed. ▶ Evaluate your experience. 	1, 2, 3, 4 5, 6, 7, 8	2	10	3, 9	7
<ul style="list-style-type: none"> ▶ Invite speakers to make presentations on select occupations in the career pathways. ▶ Conduct individual/group research before the presentations. ▶ Include academic, employability, and occupational skills, as well as health and safety issues. ▶ Complete the statement: “I am (not) interested in _____ because...” ▶ Develop a visual display of protective clothing and gear for different jobs. 	2, 3, 6, 7	2, 6	4, 5, 9, 10	2, 3, 11	6, 8
<ul style="list-style-type: none"> ▶ Research the kinds of jobs available today and projected for the future. Include market demand, geographical locations, working conditions, and compensation. ▶ Conduct electronic/media searches on a broad occupational area. ▶ Prepare a multimedia presentation for the class. ▶ Compare individual interests and abilities and career choices based on the information presented. 	2, 3, 5, 7	5, 6, 9	5, 8, 10	11	
<ul style="list-style-type: none"> ▶ Develop a career plan and portfolio based on individual interests and abilities. ▶ Develop and maintain a resume that includes school and community activities and hours. ▶ Categorize and select courses offered in the middle and high school programs that promote preparation in the career pathway. 	3, 4, 6, 10	2, 7	15	1, 3, 9, 11	
<ul style="list-style-type: none"> ▶ Participate in an exploratory series of activities to broaden occupational skills in areas such as technology education, consumer education, child care, fashion design, food services, agriculture, medical arts, conflict mediation, etc. 	3, 5, 7, 8	2, 7	15	2, 3, 11	3, 4, 5, 7



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Hold a “real life” fair where students role play various life situations and their impact on careers and future life. ▶ Examples are substance abuse, criminal record, college loan debt, low grades, poor attendance, etc. ▶ Prepare a budget for living within a defined wage/salary for an occupation. ▶ Complete a financial wage analysis that includes deductions for taxes and benefits, insurance, loans, pension contributions, etc. 	1, 2, 3, 10, 11, 12	2, 5, 6, 8	1, 13 14	11	
<ul style="list-style-type: none"> ▶ Participate in the <i>Real Game</i> activities. <p>Teacher Tip: <i>This is a multidisciplinary program that provides activities based on role playing experiences typical of an assigned career (www.realgame.com). Opportunities for career exploration include studying all aspects of career development and decision making/problem solving as well as academic skills. Other programs related to career guidance are Choices(www.choicesedgroup.org), Junior Achievement (www.ja.org), Micro-Society (www.microsociety.org), Mini-Society (www.minisociety.com), and/or McTown USA (see resource list).</i></p>	2, 3, 4, 5, 7, 12		1, 3, 8, 10, 11, 12, 13, 14	1, 2, 7	
<ul style="list-style-type: none"> ▶ Participate in a Micro-Society or entrepreneurial experience. ▶ Apply for positions as safety patrol members, financial officers, attendance clerks, CEO, business manager, public relations coordinator, etc. ▶ Develop a system for rewarding points/faux money for attendance, participation in events, etc. ▶ Plan and implement a culminating activity such as an entrepreneurial fair where students may use the money earned to purchase items made by various classes. 	1–12	1, 2, 3, 5, 6, 7, 8	15	1, 2, 3, 4, 5, 6, 7, 8, 9, 11	7
<ul style="list-style-type: none"> ▶ Search the Internet and print ads for potential employment opportunities. ▶ Categorize these by career majors. ▶ Select one of interest and write a letter of application. ▶ Prepare a resume for the position. ▶ Role play interviewing for the position. <p>Teacher Tip: <i>Encourage students to explore WNJPIN (www.njpin.state.nj.us) for information on careers and jobs.</i></p>	3, 9, 10, 11	5, 6, 8	4, 5, 8	3, 9	

Sample Activities

List of CCWR Standards

C. Reflection/Evaluation

- ▶ Use a journal to record reactions to various presentations/ interviews/job shadowing experiences, etc.

3, 4, 6

2

8, 10

- ▶ Compare employability skills as they apply to the job of being

1, 2, 5, 7

8, 9

3

- ▶ Use a rubric to evaluate the interviews conducted in role play situations.
- ▶ Provide constructive criticism.

2

7, 8

4, 5, 6

D. Extension

- ▶ Apply for and work in actual employment, adhering to child labor laws.

1–12

2

15

1–11

1–9

- ▶ Investigate fighting and anger management in the workplace.

5

5

5

4, 5, 6, 8

8



9-12

Statement I:

An individual wants to select a career pathway (Arts and Humanities; Health and Human Services; Mathematics, and Technology; and Business and Information) in an area of interest for future employment and postsecondary and lifelong learning.

Focus: Conduct research and perform preparatory activities to select a specific career pathway for future employment, postsecondary education and lifelong learning.

Links to Other Standards: Arts (Visual and Performing) 1.3, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.11, 4.12; Science 5.2; Social Studies 6.1, 6.3, 6.4, 6.5, 6.6; World Languages 7.1

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Complete an interest inventory or revisit previous interest inventories from the student portfolio. ▶ Write a persuasive essay or letter of application for a job or admission to a postsecondary institution that emphasizes personal skills, competencies, abilities and interests, past and current employment, and school and community activities. 	2, 3, 5, 6, 10	2	8, 10	1, 3, 11	
<ul style="list-style-type: none"> ▶ Job shadow a person in a selected career pathway <p>Teacher Tip: <i>Job shadowing is recommended for the early years of high school only, not for career preparation.</i></p>	2, 3, 6, 7		7, 10	2, 9	7
<ul style="list-style-type: none"> ▶ Participate in comprehensive courses that involve skill development related to a career pathway choice: for example, keyboarding, computer applications and Accounting I and II, as a sequence in the business and information career pathway. ▶ Complete individual and group projects that demonstrate skill development and add them to a portfolio. 	2, 3, 4, 5, 6, 7	2	15	1, 3, 10, 11	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Volunteer or participate in a community-service activity related to in the career pathway. ▶ Evaluate the experience. 	1, 2, 3, 4 5, 6, 7, 8	2	10	2, 3, 4	7
<ul style="list-style-type: none"> ▶ Plan a career day. Invite speakers to make presentations on select occupations in the career pathways. ▶ Conduct individual/group research before the presentations. ▶ Ask speakers to include information on academic, workplace, and occupational skills as well as information on health and safety issues. <p>Teacher Tip: A series of panels may be substituted for a career day.</p>	2, 3, 6, 7	2, 4, 6	3, 4, 5	1, 2, 9, 11	6, 8
<ul style="list-style-type: none"> ▶ Conduct electronic/media searches on a specific career. ▶ Interview a person in the field, using predetermined questions. ▶ Prepare a multimedia presentation for the class. ▶ Compare individual interests and abilities with career choices based on the information presented. 	2, 3, 5, 7	5, 6, 9	5, 8, 10	2, 3, 6, 7, 9, 10, 11	
<ul style="list-style-type: none"> ▶ Review and modify the career plan and portfolio based on individual interests and abilities. ▶ Discuss how avocations can lead to careers. 	3, 4, 6	2	10	1, 3	
<ul style="list-style-type: none"> ▶ Prepare or update a resume. Complete job applications. ▶ Role play interviewing for various positions. <p>Teacher Tip: Encourage students to explore WNJPIN (www.njpin.state.nj.us) for information on careers and jobs.</p> <ul style="list-style-type: none"> ▶ Obtain a paid job and work for a period of time. ▶ Analyze this employment experience against future goals and objectives. ▶ Identify skills that are transferable to future jobs. ▶ Review on-the-job performance with the mentor or employer. 	1–12	2	10, 15	1, 2, 4, 9	4, 5, 7
<ul style="list-style-type: none"> ▶ Develop and work in a school-based enterprise such as a student store, a floral shop, a bagel express, etc. ▶ Analyze this employment experience against future goals and objectives. <p><i>Continued on next page</i></p>	1–12	2	10, 15	1, 2, 3, 9, 11	2, 3, 4, 5, 7



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Identify skills that are transferable to future jobs. ▶ Evaluate the success of the enterprise in achieving its financial goals. 					
<ul style="list-style-type: none"> ▶ Develop and complete a senior experience. ▶ Select a problem, identify a mentor, conduct research, write a report, and make a presentation to an audience. ▶ Analyze the experience in terms of future career goals and objectives. 	2, 3, 4, 5, 7	2, 5, 8, 9	1, 5, 8, 10, 15	1, 2, 3, 9, 10	7
<ul style="list-style-type: none"> ▶ Investigate salaries for different jobs at the entry, mid-management, and executive levels. ▶ Propose a budget, including savings, for a single person and/or a family. Incorporate the data in a spreadsheet program using algebraic formulas. ▶ Research the origins and history of federal, state, social security, and unemployment taxes. ▶ Develop an alternative system to fund services and retirement. 	12	4, 5, 6	15		
<ul style="list-style-type: none"> ▶ Hypothesize the reasons for the rise of the labor movement in the United States. ▶ Validate the hypothesis. 		5, 6	3, 5, 8, 9, 10, 12	10	
<ul style="list-style-type: none"> ▶ Develop a timeline showing the events that led up to the passage of child labor laws. 		2, 5, 6	5, 8		8
<ul style="list-style-type: none"> ▶ Trace gender and equity employment issues throughout various eras. 		2, 5, 6	1, 5, 8, 9, 12	10	
<ul style="list-style-type: none"> ▶ Select a career pathway focused on one broad industry. ▶ Collect, organize, and analyze data on all jobs available as part of all aspects of the industry. ▶ Identify the levels of education necessary for each employment opportunity. ▶ Create a diagram showing possible jobs for advancement in the industry. ▶ Develop a visual presentation comparing salary ranges for various positions in the industry. 	2, 3, 4, 5, 6, 7, 9	2, 5, 6, 8	3, 5, 8, 9	10	6, 8

Continued on next page

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Compare accident rates for various positions within the industry. ▶ Hypothesize causes for the accidents. 					
<ul style="list-style-type: none"> ▶ Research employment opportunities overseas within a career pathway of interest. ▶ Complete a job application package in another language. 	9, 10	2, 5, 6, 8	5, 8		
C. Reflection/Evaluation					
<ul style="list-style-type: none"> ▶ Compare the student evaluation process with the employer's assessment process for employees. 	2	2	9		
<ul style="list-style-type: none"> ▶ Determine future educational goals and develop a financial plan for funding further study. 	4, 6, 12	2	15	1	
<ul style="list-style-type: none"> ▶ Keep a journal of reactions, feelings, etc., that can be reviewed for future self-assessment. 	2	10	3		
<ul style="list-style-type: none"> ▶ Write a narrative that describes a typical day for a person in a career pathway. 	3	2			
D. Extension					
<ul style="list-style-type: none"> ▶ Select and use a budgeting/financial-planning software package. 	12	2, 3	15		
<ul style="list-style-type: none"> ▶ Use the data from the previously proposed budget to develop an investment portfolio. Compare saving opportunities based on salary ranges. ▶ Select hypothetical investments and track the yield by percentage and actual amount over a defined period of time. 	12	2, 3, 8,	1, 7, 8, 9, 11, 12, 13, 14	1, 9	



K-4

Statement J:

Although New Jersey is well known as the Garden State, it certainly could be recognized as the Invention State. We now live in an increasingly complex “global society” with demands for increased invention, design, and manufacturing to make people’s lives and work more productive while meeting personal and family needs.

Focus: Same as above.

Links to Other Standards: Arts (Visual and Performing) 1.4, 1.5, 1.6; Comprehensive Health and Physical Education 2.1, 2.4, 2.6; Language Arts Literacy 3.2, 3.3, 3.4; Mathematics 4.1, 4.2, 4.3, 4.7, 4.10; Science 5.1, 5.2, 5.3, 5.10; Social Studies 6.5; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

- ▶ Research a constructivist learning approach to inventing, designing, and making products.
- ▶ Obtain information on existing local, statewide or national invention competitions such as the New Jersey Mathematics Coalition Calendar Contest, Inventing America, the Toshiba/NSTA Explora Vision.

B. Action: The student will

- ▶ Discuss the “big ideas” related to inventing, designing, and making a product.
- ▶ Develop a visual organizer or a concept map illustrating what is already known about the topic.
- ▶ Make additions to the organizer or concept map on an ongoing basis.
- ▶ Read stories about inventors, designers, and engineers from around the world.
- ▶ Contrast different products designed to solve the same problem: a fork, a spoon, a knife, chopsticks, a bowl, etc.
- ▶ Create a new way to complete a routine, for example, combing

Continued on next page

1	2	3	4	5
8	3, 15			
3	1	5		
	2, 6	7, 9		6

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<p>hair, brushing teeth.</p> <p>► Compare different versions of similar products: for example, health products like toothpaste.</p> <p>Teacher Tip: <i>Vocabulary may be presented in more than one world language.</i></p>					
<p>► Determine the function and/or origin of materials used to make a product, for example, the wood or graphite used in a pencil. Learn the word for the product in the country of origin.</p> <p>Teacher Tip: <i>Explore the geography, history, and culture of the country of origin of the materials.</i></p>		1, 3, 6	5, 9		
<p>► Document the evolution of a product related to the problem using a timeline that shows how and why a product's design has changed.</p> <p>► Project how the product might change in the future.</p> <p>Teacher Tip: <i>See the Toshiba NSTA Contest as an example.</i></p>		1, 3, 5, 7, 10	1, 2, 5, 7, 8, 9, 11, 14	1	
<p>Complete a design brief (DB) for one of the projects described below:</p> <p>Teacher Tip: <i>Be sure students discuss safety issues and develop a safety plan for the design brief selected.</i></p>					
<p>► DB#1: Design and construct a model of a device that enables a Teddy Bear or other favorite stuffed animal or doll to sleep comfortably throughout the year.</p> <p>Teacher Tip: <i>See K-6 modules developed through Project UPDATE, an NSF funded, integrated curriculum-development initiative, at http://www/tcnj.edu/~ties or other similar sites.</i></p>	1, 3	1, 2, 7	15	1, 9	3, 5, 7
<p>► DB#2: Design a calendar for an upcoming year that highlights the achievements of a select group or combination of people such as scientists, inventors, business leaders, or heroes.</p> <p>Teacher Tip: <i>See a sample design brief used during NJ's Mathematics, Science, and Technology Month. Note: This design brief can be extended to a schoolwide activity.</i></p>	1, 3	1, 2, 7	15	1, 9	3, 5, 7
<p>► DB#3: Participate in the Toshiba/NSTA Explora Vision competition and design a portfolio which illustrates the future</p>	1, 3	1, 2, 7	15	1, 9	3, 5, 7

Continued on next page



Sample Activities

List of CCWR Standards

	1	2	3	4	5
direction of a selected technology. Teacher Tip: <i>Entry deadline for all categories is February of each year. For more information see http://www.toshiba.com/tai/exporavision.</i>					
<ul style="list-style-type: none"> ▶ DB#4: Participate in the NSTA Young Inventors program and “design and build a tool that performs a practical function, including but not limited to tools that mend, make life easier or safer in some way, entertain, or solve an everyday problem.” Teacher Tip: <i>Documentation to include a three- to seven-page inventor’s Log and a photograph of the inventor demonstrating the tool. This program is open to students in grades 2-5. Entry deadline is in March of each year. For more information see http://www.nsta.org/programs/craftsman.htm. Hold an inventor’s fair.</i> 	1, 3	1, 2, 7	15	1, 9	3, 5, 7
<ul style="list-style-type: none"> ▶ DB#5: Create a design brief for a class- or self-initiated entrepreneurial project. 	1, 3	1, 2, 7	15	1, 9	3, 5, 7
<ul style="list-style-type: none"> ▶ Invite guest speakers from the entrepreneurial or manufacturing community to explain their business, inventions, and/or products. 	2, 3, 5, 7		3, 4	2	7
C. Reflection/Evaluation					
<ul style="list-style-type: none"> ▶ Maintain a daily, one-page class log describing (1) the focus of each day’s work, (2) something learned or information acquired that would answer a “need-to-know” question on the concept map, and (3) mnemonic reminders for the next class session. 		2	8, 10	3, 9	
<ul style="list-style-type: none"> ▶ Design groups present the results of their work to the class or other audience. ▶ Provide peer feedback. Teacher Tip: <i>Use a rubric to provide feedback to the students.</i>		9	2, 8, 10	2, 3, 4, 5, 7, 9	3, 4, 7
D. Extension					
<ul style="list-style-type: none"> ▶ Display design solutions at a school open house or other event. 		9	4	2	4, 5
<ul style="list-style-type: none"> ▶ Manufacture and sell the product or invention through a local vehicle. 	1, 3, 5	2	15	1, 2, 3	1–9
<ul style="list-style-type: none"> ▶ Obtain newspaper coverage showcasing the student’s involvement. 		2	4		7



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> Discuss the academic preparation necessary for employment in these fields. <p>Teacher Tip: <i>Ensure that the individuals selected for study represent gender and cultural diversity. Encourage students to broaden their experience by pursuing new individuals and problems.</i></p>					
<ul style="list-style-type: none"> Invite a businessperson from the community to speak with the class about a focused topic, such as invention, patents, product design/development, or innovation (e.g., developing an invention into a marketable product). <p>Teacher Tip: <i>Sources for speakers include corporate speakers bureaus, the Department of Labor, the local/state chamber of commerce, or parents of students.</i></p>	2, 3, 5, 6, 7	10	3, 4		7
<ul style="list-style-type: none"> Conduct a human factors study. Analyze and plot data that would be useful to a company designing and manufacturing a product related to that factor. Determine mean, mode, median, and standard deviation and plot them on a graph. Discuss how a company would use this information in the designing and manufacturing process. An example includes measuring and plotting a gender-neutral trait such as shoe length or width. <p>Complete a design brief (DB) for one of the projects described below:</p> <p>Teacher Tip: <i>Be sure students discuss safety issues and develop a safety plan for the design brief selected.</i></p>		1, 2, 4, 5, 6, 7, 8	1, 3, 5, 12		
<ul style="list-style-type: none"> DB #1: Design and model a developmentally appropriate traveling board game to keep two or more third- or fourth-graders occupied while traveling in a car or other transportation mode. 	1, 3	1, 2, 7	15	1, 9	3, 5, 7
<ul style="list-style-type: none"> DB#2: Design a calendar for an upcoming year that highlights the achievements of a select group or a combination of people such as scientists, inventors, business leaders, or heroes. <p>Teacher Tip: <i>See a sample design brief used during NJ's Mathematics, Science, and Technology Month. Note: This design brief can be extended to a schoolwide activity.</i></p>	1, 3	1, 2, 7	15	1, 9	3, 5, 7

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<p>▶ DB#3: Design, produce, and package a snack-food product for teenagers that contains cereal as a primary ingredient. The snack should be wholesome, and have a long shelf life, and a unit retail price between fifty cents and one dollar per individual serving.</p> <p>Teacher Tip: <i>Parts of the production and packaging may be divided among various classes to involve art and design/computer technology in the labeling, packaging design, and production of the snack.</i></p>	1, 3, 8, 12	1, 2, 7, 8	15	1, 9	3, 4, 5, 7
<p>▶ DB#4: Participate in the NSTA Young Inventors program and “design and build a tool that performs a practical function, including but not limited to tools that mend, make life easier or safer in some way, entertain, or solve an everyday problem.”</p> <p>Teacher Tip: <i>Documentation to include a three to seven page Inventor’s Log and a photograph of the inventor demonstrating the tool. This program is open to students in grades 2-5. Entry deadline is in March of each year. For more information see: http://www.nsta.org/programs/craaftsman.htm.</i></p>	1, 3	1, 2, 7	15	1, 9	3, 5, 7
<p>▶ DB#5: Select a service learning project. Analyze it and adapt/modify/design an innovation to the system that will better serve the needs of the group or individuals involved.</p>	1, 3	1, 2, 7	15	1, 9	3, 5, 7
<p>▶ Research the process of applying for a patent.</p> <p>▶ Establish a mini-patent office in the classroom so each group can apply for a patent upon completion of the product or concept.</p>	5, 6	2, 5, 6	5		
<p>C. Reflection/Evaluation</p> <p>▶ Maintain a daily, one page class log describing (1) the focus of each day’s work, (2) something learned or information acquired that would answer a “need-to-know” question on the concept map, and (3) mnemonic reminders for the next class session.</p> <p>▶ Record progress through an electronic portfolio format as an option.</p>		2	8, 10	3, 9	



Sample Activities

- ▶ Design groups present the results of their work to the class or other audience.
- ▶ Develop a rubric and provide peer feedback.

D. Extension

List of CCWR Standards

	1	2	3	4	5
		9	2, 8, 10	2, 3, 4, 5, 7, 9	3, 4, 7
<ul style="list-style-type: none"> ▶ Test the products with students in another class or school. ▶ Design and analyze the results of a survey evaluating the product. ▶ Develop a new recipe or improve an existing one. ▶ elect a site for a sample taste test. ▶ Compile consumer taste results. ▶ Determine the winner. <p>Teacher Tip: Be sure foods are labeled with ingredients to avoid allergic reactions in taste testers.</p>	3	2, 4	3, 6, 8, 9, 12	2, 9	3, 4, 7
<ul style="list-style-type: none"> ▶ Manufacture and sell the product/invention. ▶ Do a cost analysis to determine selling price, profit margin, and overhead costs. ▶ Determine the distribution of the proceeds, such as reinvesting in the project or donating to a charitable organization. 	1, 3, 5, 7, 8, 12	2	4, 12, 15	1, 2, 3, 9, 11	1–9
<ul style="list-style-type: none"> ▶ Investigate potential health problems and safety hazards associated with producing products for consumption. ▶ Discuss ergonomics. ▶ Examine various products and clarify functions and utility. ▶ Develop a safety plan to address potential problems. 		2, 10	5	9	1, 2, 5, 6, 8, 9
<ul style="list-style-type: none"> ▶ Investigate the circumstances associated with the deaths of Marie Curie in 1934 and Karen Wetterhahn at Dartmouth College in 1997. ▶ Discuss how occupational risks may have been prevented. ▶ Identify the different laws that are designed to protect consumers, workers, and the environment before a new product is introduced into the marketplace. 		2, 6	1, 3		6, 8
<ul style="list-style-type: none"> ▶ Prepare press releases, fliers and advertisements featuring the products or inventions. 	1, 3, 5	8	15		

Sample Activities

List of CCWR Standards

- ▶ Participate in a packaging design activity for middle school students, such as the one produced by FACETS (published by Kendall Hunt) in association with the American Chemical Society.

- ▶ Plan and take field trips to museums, societies and businesses that invent things.
- ▶ Document how inventions are encouraged as part of the business cycle.

1	2	3	4	5
1, 3, 8, 12	1, 2, 8	15	1, 9	3, 4, 5, 7

3	2	3	1, 2	7
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9-12

Statement J:

Although New Jersey is well known as the Garden State, it certainly could be recognized as the Invention State. We now live in an increasingly complex “global society” with demands for increased invention, design, and manufacturing to make people’s lives and work more productive while meeting personal and family needs.

Focus: Same as above.

Links to Other Standards: Arts (Visual and Performing) 1.4, 1.5, 1.6; Comprehensive Health and Physical Education 2.4, 2.6; Language Arts Literacy 3.2, 3.3, 3.4; Mathematics 4.1, 4.2, 4.3, 4.7, 4.10; Science 5.1, 5.2, 5.3, 5.10; Social Studies 6.5; World Language: 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

- ▶ Research a constructivist learning approach to inventing, designing, and making products.
- ▶ Obtain information on existing local, statewide or national invention competitions such as the New Jersey Mathematics Coalition Calendar Contest, FIRST Robotics Competition, the Toshiba/ NSTA Explora Vision Awards.

B. Action: The student will

- ▶ Construct a journal that describes the personal use of inventions over the course of one day and reactions to efficiency, suitability, and effectiveness.
- ▶ Analyze the effects of technology (e.g., microwaves, VCRs, answering machines, wireless phones) on family life.
- ▶ Include examples from your home life.
- ▶ Create a database of inventors based on a career pathway of choice.
- ▶ Using a world language of choice, present information on one inventor from the career pathway.
- ▶ Explain some of the workplace readiness and occupational skills of the chosen inventor.

Continued on next page

1	2	3	4	5
	2, 10	10	10	
2, 3, 5, 6, 7	4, 6, 9	5, 8	11	

Sample Activities

List of CCWR Standards

- ▶ Discuss the academic preparation necessary for employment in the field.

Teacher Tip: Ensure that the individuals selected for study represent gender and cultural diversity. Encourage students to broaden their experience by pursuing new individuals and problems.

- ▶ Locate job openings that require the skills and abilities demonstrated by the inventors, designers, and engineers or by group members performing the tasks.

Teacher Tip: Use WNJPIN (www.wnjp.in.state.nj.us) as a resource in addition to other print materials in libraries and newspapers.

- ▶ Participate in a mentoring or structured learning experience with inventors, designers, or engineers.

- ▶ Interview or talk in a chat room with a person employed in invention/patents/ product design or development regarding academic preparation, employability skills, job satisfaction, working conditions, salary ranges, and potential for advancement.

- ▶ Prepare and deliver a multimedia presentation.

- ▶ Compare and contrast the *inquiry method* used by scientists to discover new knowledge with the *design process* used by technologists to invent products.
- ▶ Consider important issues related to *technological progress*.
- ▶ Include the trade-offs and risks associated with using a new technology and the unforeseen impacts in developing products that satisfy wants and needs while focusing on sustainability.
- ▶ Analyze how inventions for fitness (e.g., Nordic Track or the heart monitor) have influenced daily life and life expectancies.

Complete a design brief (DB) and complete an application for a position on the design team for one of the projects described below:

Teacher Tip: Be sure students discuss safety issues and develop a safety plan for the design brief selected.

Continued on next page

1	2	3	4	5
9	6, 7	4, 5	9, 11	
1, 2, 3, 5, 6, 7, 8	2	15	2, 3, 6, 9	7
2, 3, 5, 7, 9	3, 5, 6	3, 4, 5, 8		7
	10	9, 12		



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ DB#1: Form a small peer group (three to four persons) and design, develop, and model a product that protects a child from a hazardous situation. Preliminary work must illustrate the research the design team has done to identify the existence of a hazardous situation. 	1, 3	1, 2, 7	15	1, 2, 9	1–9
<ul style="list-style-type: none"> ▶ DB#2: Design a display to celebrate a special event or holiday. Examples include mobiles; windsocks; action figures; and door/window covers that incorporate a controlled source of movement, light, and/or sound. 	1, 3	1, 2, 8	15	9	3, 5, 7
<ul style="list-style-type: none"> ▶ DB#3: Participate with a mentor in a design competition. <i>Teacher Tip: An example of this is the FIRST competition (www.usfirst.org).</i> 	1, 2, 3, 5, 6, 7, 8	1, 2, 9	15	2, 9	3, 4, 7
<ul style="list-style-type: none"> ▶ DB #4: Participate in the DURACELL/NSTA Invention Challenge and design a device that solves a problem and incorporates a battery as source of energy. Include a computerized Inventor's Log and a videotape of the inventor demonstrating the tool as part of the documentation. <i>Teacher Tip: This program is open to students in grades 6-12. Entry deadline is in January of each year. For more information see http://www.nsta.org/programs/duracell.htm.</i> 	1, 3	1, 2, 7	15	1, 9	3, 4, 7
<ul style="list-style-type: none"> ▶ Prepare a resume that includes project and structured learning experiences. 	10	8	10		

C. Reflection/Evaluation

- ▶ Maintain a daily, one-page class log describing (1) the focus of each day's work, (2) something learned or information acquired that would answer a "need-to-know" question on the concept map, and (3) Mnemonic reminders for the next class session.
- ▶ Record progress through an electronic portfolio format as an option.

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Conduct internal testing of products. ▶ Redesign product based on the test results. ▶ Test the product again to ensure item meets specifications. 		1, 2	6, 7, 12, 14	5, 9	1, 3, 4, 5, 6, 7
<ul style="list-style-type: none"> ▶ Present design groups projects to a review panel. <p>Teacher Tip: The review panel might consist of business and industry representatives.</p>		9	2, 8, 10	2, 3, 4, 5, 7	3, 4, 7
<ul style="list-style-type: none"> ▶ Use a journal to record feelings and reactions to mentoring, structured- learning experiences, and career preparation activities and compare these with personal career choices. 	3, 4, 6	2	10	3, 11	
D. Extension					
<ul style="list-style-type: none"> ▶ Invite designers/engineers to school and have students present their design solutions to a panel. 		9	2, 10	2, 4	7
<ul style="list-style-type: none"> ▶ Display design solutions at a school open house. 		9	4	2	4, 5
<ul style="list-style-type: none"> ▶ Prepare press releases, fliers and advertisements featuring the products/inventions. 	1, 3, 5	8	15		
<ul style="list-style-type: none"> ▶ Create a consumer report on a product developed. ▶ Include the research methods and procedures used in evaluating the product. 	12	8	8	5	
<ul style="list-style-type: none"> ▶ Investigate the Responsible Care initiative developed by the Chemical Manufacturers Association and discuss the implications this effort has on new product development. 		5, 6	3, 8		8



K-4

Statement K:

The behavior of sports stars and movie personalities has been called into question. Develop a system for identifying and promoting positive role models in the community.

Focus: Identify the positive character traits associated with role models and relate them to employer requirements.

Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.3; Science 5.2, 5.3; Social Studies 6.5; World Language 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Develop a list of character traits and define them (e.g., honesty, responsibility, respect for others, fairness, tolerance). ▶ Present the list in more than one language. ▶ Develop an illustration depicting a situation in which a positive character trait was demonstrated. 		2	9, 10	6	
<ul style="list-style-type: none"> ▶ Discuss heroes. ▶ Brainstorm a list of people considered to be heroes. ▶ Categorize the heroes identified (e.g., media heroes, sports heroes, cultural heroes, family members, other role models). ▶ Discuss the traits a hero should possess. 	2		8, 9, 10	9	
<ul style="list-style-type: none"> ▶ Assess the positive qualities in identified heroes. <p>Teacher Tip: <i>Divide the class into cooperative groups.</i> Visit the web site, www.clcrc.com/pages/assess.html.</p> <ul style="list-style-type: none"> ▶ Explain which hero the learner would choose as a friend. 	2		10	2	
<ul style="list-style-type: none"> ▶ Create a super hero using the list of character traits the learner deems most important. Write a paragraph or create a collage as part of the presentation. <p>Teacher Tip: <i>Instead of a super hero, create another super person such as coach, a teacher, a community helper, etc.</i></p>	2, 5	2, 9	10	11	

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Create a list of good worker traits. Compare and contrast with the list of character traits. 	1, 2, 5	2	9, 12	11	
<ul style="list-style-type: none"> ▶ Write a resume from a template for a job of a role model using related character traits. 	10	8	8		
<ul style="list-style-type: none"> ▶ Role-play an employment agent and applicant. ▶ Dress up as a role model chosen from the list. ▶ Apply for the job and convince the “employment agent” that the person is the perfect candidate for the job. 	9, 10, 11		10	6, 11	
C. Reflection/Evaluation <ul style="list-style-type: none"> ▶ Create an inventory to provide feedback as students role-play and project the employee to be hired. 			3, 8	5	
D. Extension <ul style="list-style-type: none"> ▶ Create a role-model journal to be kept throughout the year. <i>Teacher Tip: Journal content will vary but should include a list of the qualities discussed. Illustrations, drawings, and collages may be used.</i> ▶ Investigate a hero. Write a research paper including a bibliography. ▶ Develop a display illustrating heroes and their traits. 		2	10	7, 9, 11	
		3, 5, 6, 8	5	10	
		2	15		7



5-8

Statement K:

The behavior of sports stars and movie personalities has been called into question. Develop a system for identifying and promoting positive role models in the community.

Focus: Analyze and evaluate the character traits of public figures from around the world.

Links to Other Standards: Arts (Visual and Performing): 1.3; Comprehensive Health and Physical Education: 2.2; Language Arts Literacy: 3.1–3.5; Mathematics: 4.3, 4.5, 4.8, 4.9, 4.12; Science: 5.2, 5.3, 5.4; Social Studies: 6.2, 6.3, 6.8, 6.9; World Language: 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Brainstorm what makes someone a role model and the qualities a role model might have. ▶ In a written paragraph list and defend personal role models. 		2	10	9	
<ul style="list-style-type: none"> ▶ Use magazines and newspapers from around the world to find pictures of role models. Make a collage from the pictures. 		2	2, 15		4
<ul style="list-style-type: none"> ▶ Develop a database that includes the characteristics and profiles of the role models. ▶ Create an “ideal” profile in more than one language. ▶ Develop a resume from a template for this “ideal” person for a specific career pathway. 	10	4, 8	8, 10	11	
<ul style="list-style-type: none"> ▶ Research and compare public figures from around the world with the ideal profile. 		5, 6	5, 8, 9		
<ul style="list-style-type: none"> ▶ Identify some local personalities from career areas such as business, education, politics, sports, the arts, etc., who approximate the ideal profile. Interview a local personality on his/her career. ▶ Discuss the attitudes workers and citizens should have toward complying with occupational safety and health laws and procedures. 	3	2	3, 8, 9	2, 11	1, 7, 8

Sample Activities

		List of CCWR Standards				
		1	2	3	4	5
	<ul style="list-style-type: none"> Participate in a mentoring program or job shadow a person in a career pathway. Evaluate the experience. Compare similarities and differences for role models and mentors. 	1, 2, 3, 5, 7	2	3, 7, 9, 10	1, 2, 3, 9, 11	7
	C. Reflection/Evaluation					
	<ul style="list-style-type: none"> Draw a conclusion as to whether or not the opinions held of the public figure changed as a result of doing the comparison. 			3, 10		
	<ul style="list-style-type: none"> Create a game board, that includes ideal profiles, public offices, campaigns with famous heroes, and role models. 		2, 5, 8	5, 15		4
	<ul style="list-style-type: none"> Debate whether a nationally known person is a hero. Use a rubric with “ideal” qualities. 			3, 8, 11	9	
	<ul style="list-style-type: none"> Complete an interest inventory. Place the results in a career portfolio. 	3, 4	2			
D. Extension						
	<ul style="list-style-type: none"> Divide into teams to develop strategic and tactical plans for the following scenario. The sports star that a company has used for years as a commercial spokesperson and to whom the corporation has become closely linked has just been found to be using steroids. A reporter asks the company public relations representative a sensational question relating to this issue during an otherwise routine press conference. The corporation needs to decide what to do about the issue. It does not have expertise in-house to deal with such a massive public relations debacle, so the company will be awarding a contract with a public relations/media relations firm to handle the situation. After developing their plans, teams present them to the company in hopes of being awarded the multi-million dollar contract (an outside businessperson can be brought in to make the judgment). 		2, 8	15	1, 2, 9, 11	7
	<ul style="list-style-type: none"> Create a Wall of Fame for the school auditorium. Develop criteria for choosing the people for the Wall of Fame. Develop a program or ceremony for inducting these local heroes for the Wall of Fame. Complete a cost analysis of the project. 	12	6, 9	15	1, 2, 9, 11	4, 7



9-12

Statement K:

The behavior of sports stars and movie personalities has been called into question. Develop a system for identifying and promoting positive role models in the community.

Focus: Interaction with role models in the workplace.

Links to Other Standards: Arts (Visual and Performing) 1.3; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.3; Science: 5.2, 5.3; Social Studies 6.2, 6.5; World Language 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: *The student will*

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Search the <i>New York Times</i> database to find award-winning essays on role models written by high school learners in New York City public schools and other districts. ▶ Read those essays. ▶ Analyze the essays for the portrayal of the positive qualities of the role models. <p>Teacher Tip: <i>Research databases in New Jersey and throughout the world.</i></p>		4, 5	5, 9, 12		
<ul style="list-style-type: none"> ▶ Categorize the careers of the role models into career pathways. ▶ Hypothesize the positive qualities that lead to advancement in the chosen careers. 	2, 3, 4, 5, 7	3	3, 8, 9		
<ul style="list-style-type: none"> ▶ Choose a role model in a career field of interest. ▶ Write (in more than one language) and publish a curriculum vitae for that individual; specify professional preparation and achievements, occupational skills, educational background, and personal interests. ▶ Use print and electronic job-posting services to locate potential employment opportunities worldwide. ▶ Research web sites and computer-based career programs to obtain information on careers. 	2, 3, 4, 5, 7, 9, 10	2, 8	5, 8, 9		

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> Interview a successful local business or industry employee who fits the criteria of a positive role model. Summarize information and categorize according to the identified positive qualities. 	2, 3, 5, 7	2	3, 8, 9	11	7
<ul style="list-style-type: none"> Participate in a structured-learning experience under a local workplace mentor. Evaluate the experience based on the development of employability skills that will lead to becoming a mentor in the future. 	1, 2, 6, 7, 8	2	8, 10	2, 3, 9	3, 4, 7
<ul style="list-style-type: none"> Role-play your response to a person who is working in a way that endangers both their own and your health and safety. 			1	8	1, 7, 8
<ul style="list-style-type: none"> Develop a system that fosters service, (e.g., a mentor/peer mentor/tutor) and serve in that capacity. <p>Teacher Tip: Students are encouraged to apply and interview for mentor positions.</p>	1, 5, 6	2	15	2, 9	3, 4, 5, 7
C. Reflection/Evaluation					
<ul style="list-style-type: none"> Write original essays on the contributions of individuals who emphasize community/workplace success above personal gain. <p>Teacher Tip: Essays may be written in a language other than English.</p>	5	2		11	
<ul style="list-style-type: none"> Students choose a piece of world literature that addresses the theme of role models. Analyze the characteristics. 		6	8		
<ul style="list-style-type: none"> Write an original poem that illustrates the qualities exhibited by the role model in the literary selection read. <p>Teacher Tip: Resources and presentation may be in a language other than English.</p>		2	9		
<ul style="list-style-type: none"> Create grading rubrics for an original essay and multimedia presentation. 		2		9	



Sample Activities

List of CCWR Standards

D. Extension

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Choose a piece of literature that depicts positive role models. ▶ Compare the literary role model with a contemporary role model. 		6	5, 9		
<ul style="list-style-type: none"> ▶ Create an original poem, song, multimedia slide show, game, etc. that illustrates the qualities exhibited by any identified role model. 		2, 8	9		
<ul style="list-style-type: none"> ▶ Divide the class into teams to address the following scenario: A famous rock star/movie star has accepted your class's invitation to attend prom night festivities. Public appearances by this star often result in dangerous, rowdy conditions. The school realizes that it might be held liable for any destruction, damage, or personal injury that would occur to people or property during this event. It must take all precautions that would fully protect the community, the students, and the faculty, etc. from any and all negative occurrences. The school does not have expertise on its staff to deal with such issues, so it will be contracting the effort to security firms. ▶ The class divides into several teams that role-play the employees of a security firm bidding on the contract. One team in the class assumes the identities of school officials who, over the course of time, meet often with the security firms to lay out the issues and eventually award the contract to one of the firms. 		2, 8	15	1, 2	1, 2, 6, 8, 9
<ul style="list-style-type: none"> ▶ Invite personal role models to school for an evening celebration. ▶ Create a multimedia presentation to highlight the personal and professional traits exhibited by the guests. ▶ Design and produce a commemorative plaque or award for each guest. 	2, 5	9	15		7

K-4

Statement L:

Current transportation systems consume natural resources and add to pollution and congestion.

Focus: Current transportation systems consume natural resources and add to pollution and congestion.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.3, 1.6; Comprehensive Health and Physical Education 2.1, 2.2, 2.3, 2.5; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.5, 4.8, 4.9, 4.10; Science 5.1, 5.2, 5.3, 5.4, 5.5, 5.8, 5.9, 5.12; Social Studies 6.1, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9; World Languages 7.1, 7.2

Sample Activities

A. Preparation: (See page 6-2)

B. Action: The student will

	List of CCWR Standards				
	1	2	3	4	5
▶ List various modes of transportation used daily.			1		
▶ Survey the class to determine the frequency of use of the various modes of transportation and graph the results.		8	3, 8, 9, 12	2	
▶ Research safety rules related to driving, walking, biking, rollerblading, etc., and those that apply to airplanes, boats, trains, etc.		6, 8	4, 5, 8, 12		1, 2, 5, 6, 7, 8, 9
▶ Create a visual presentation that summarizes safety rules.					
▶ Discuss and compare the environmental and economic impact of different modes of transportation.	12	10	1, 9, 12		
▶ Compare the advantages and disadvantages of different transportation modes in reaching a destination.		6	4, 5, 12, 13		
▶ Write a persuasive paragraph.					
▶ Divide into groups.	1	2, 6, 7	3, 8, 12, 13	9, 11	8
▶ Select a job from stories.					
▶ Determine comparable locations within the neighborhood for the job in the story.					
▶ Analyze maps to determine distances to be traveled.					
▶ Estimate the time necessary to travel from the school to the work location.					

Continued on next page



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Review the previously discussed environmental issues and come to a decision about the best means of transportation in a given situation. ▶ Discuss the importance of getting to school and work on time. 					
<ul style="list-style-type: none"> ▶ Trace the development of a mode of transportation throughout various eras of history. Create a timeline. 		5, 8	5, 8		
<ul style="list-style-type: none"> ▶ Identify songs that include modes of transportation. ▶ Select a song and perform it for the class. ▶ Construct or obtain a costume or hat that depicts a worker for that mode of transportation. <p>Teacher Tip: Encourage students to research songs from other countries and cultures.</p>	3	2	5		
<ul style="list-style-type: none"> ▶ Using map skills to measure distances for travel, select a destination and map a route for reaching it. ▶ Design a “trip-tik” itinerary for the trip. 		8	2, 15		8
<ul style="list-style-type: none"> ▶ Invite a speaker whose work involves a career related to transportation to speak to the class. ▶ Develop a list of questions related to job tasks, the preparation/training required, licensing, safety rules and crisis situations related to this career. 	1, 2, 3, 5, 7	2	3	9	6, 7, 8, 9
<ul style="list-style-type: none"> ▶ List the pros and cons of using different transportation modes consider health and safety issues, cost, environmental concerns, time, and travel and related concerns as listed above. ▶ Each group presents its findings. 	12	9	8	2	6, 7, 8, 9
<ul style="list-style-type: none"> ▶ Select a mode of transportation and compare it to another country. ▶ Create and conduct a multimedia presentation on the topic. 		5, 9	5, 15	10	
<ul style="list-style-type: none"> ▶ Plan a trip to the local police department. ▶ Develop a list of questions to interview a police officer about the consequences of behaviors and violations of driving laws. ▶ Project the impact on careers and employment. 	1, 2, 3	2	1, 3	1, 2	7

Sample Activities

- ▶ Research the methods of counting vehicles passing a specific point.
- ▶ Develop a plan for documenting travel and frequency at a particular point.

C. Reflection/Evaluation

- ▶ Write a story about a personal experience related to travel.
- ▶ Select a favorite means of transportation and defend this choice.

D. Extension

- ▶ Compare and contrast the speeds at which animals move with human modes of transportation.
- ▶ Communicate with a driver who tracks the progress of delivering people or products as part of a job assignment.
- ▶ Map starting locations, planned stops and the final destination.
- ▶ Brainstorm events that may interfere with meeting time schedules.
- ▶ Identify safety measures for this mode of transportation.
- ▶ Develop a plan to implement a bicycle-safety awareness campaign in the school.
Teacher Tip: Work with the local police department/safety division.
- ▶ Measure strides and use a pedometer to determine how long it will take to walk various distances.

List of CCWR Standards

1	2	3	4	5
	2	15		1
	8	10	3	
		10	3	
		5, 12		
3	2, 5	15	9	5, 6, 7, 8
		1, 15		1, 2, 4, 5, 6, 7, 8, 9
	2	6	9	



5-8

Statement L:

Current transportation systems consume natural resources and add to pollution and congestion.

Focus: Propose ideas that will reduce the number of cars on the roads. Research, develop, and advertise economical transportation systems that conserve natural resources.

Links to Other Standards: Arts (Visual and Performing) 1.1, 1.2, 1.4, 1.5, 1.6; Comprehensive Health and Physical Education 2.1; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.5, 4.7, 4.8, 4.10; Science 5.1, 5.2, 5.3, 5.9, 5.12; Social Studies 6.1, 6.2, 6.3, 6.4, 6.5, 6.7; World Languages 7.1, 7.2

Sample Activities

List of CCWR Standards

A. Preparation: (See page 6-2)

B. Action: The student will

- ▶ Brainstorm a list of initial questions, issues, and possible solutions related to the problem.
Teacher Tip: Encourage the students to develop wide-ranging solutions, e.g., vehicle design, public transportation systems, and community redevelopment. Consider hybrid cars, fuel cells, mandatory public transportation, and/or pedestrian malls.

- ▶ Research and debate whether vehicle manufacturers are designing or producing fuel-efficient vehicles.
- ▶ Compare American-made vehicles with those manufactured in other countries for fuel efficiency and environmental safety.
Teacher Tip: If a manufacturing facility is available, take a trip to the site. Investigate career opportunities related to design, manufacturing, etc.

- ▶ Design a fuel-efficient vehicle.
- ▶ Produce a model or prototype.
- ▶ Compare and contrast the fuel costs of operating a current gas-fueled vehicle with the costs of operating the newly designed fuel efficient model.
- ▶ Compare the safety features of the current model with those of the fuel efficient design.

1

2

3

4

5

1

6, 10

3, 5, 8, 9

7

12

7, 8, 10

8, 10, 15

1

4, 6, 7

Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Categorize fuel sources throughout the ages. ▶ Explore their impact on the environment. ▶ Write a research report with footnotes and a bibliography. 		5, 6	5, 8, 9	10	
<ul style="list-style-type: none"> ▶ Divide into teams to research and propose ideas to reduce the number of cars on the roads. ▶ Each team will champion a different solution. ▶ Develop an information packet to inform people of the idea. ▶ Conduct consumer focus groups to determine if drivers respond positively. ▶ If not, analyze why the ideas were not received positively and redesign the proposal. 		2, 8	15	2, 3, 4, 9, 11	7
<ul style="list-style-type: none"> ▶ Compare public transportation systems in different countries. ▶ Apply the best solution to the local problem. ▶ Develop a thesaurus for different forms of transportation. ▶ Include terms in other languages. 		1, 5, 6, 8	5, 8, 11, 12, 13		6
<ul style="list-style-type: none"> ▶ Develop a cost analysis for the proposed transportation system within the community. ▶ Explore government subsidy options and private ownership opportunities. ▶ Develop a model and project a one-way and a round-trip fare for a specific destination. ▶ Analyze the data in a spreadsheet program using algebraic formulas. 	12	4, 5, 8	3, 4, 5, 12		
<ul style="list-style-type: none"> ▶ Invite a local or regional planner to present information on projected community-development plans. ▶ Analyze the information presented to determine future transportation needs. ▶ Draw conclusions regarding the best transportation system to meet community-development plans. ▶ Present the recommended system in a proposal format. 		2	8, 11, 12, 13		
<ul style="list-style-type: none"> ▶ Design a community that offers the most efficient transportation options. 	3	1, 9	15	1	8



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Develop a public relations campaign to foster the use of the selected solution. ▶ Include one media form that focuses on an ethnic group speaking a language other than English. <p>Teacher Tip: Presentations can be made in different languages.</p>		8, 9	1, 15	6	
<ul style="list-style-type: none"> ▶ Categorize jobs related to this problem into career pathways. ▶ Identify the transferable skills that will be needed. ▶ Identify job openings in the local community. ▶ Develop job descriptions for the employment opportunities. <p>Teacher Tip: Plan and implement a field trip associated with transportation.</p>	2, 3, 5, 6, 7, 9	2	9		7
C. Reflection/Evaluation <ul style="list-style-type: none"> ▶ Display the final products in showcases and evaluate models through a student/ teacher-designed rubric. ▶ Invite parents, community representatives (mayor, town council members, chamber of commerce), board of education representatives, PTA groups, and the media to view the display and provide feedback. 		2		2, 3	7
<ul style="list-style-type: none"> ▶ Critique a municipal plan from another community. ▶ Write a business letter to the community offering suggestions. 		2	14	5, 6	
<ul style="list-style-type: none"> ▶ Hypothesize how various modes of transportation have changed society. 			3		
<ul style="list-style-type: none"> ▶ Job shadow a person in a career related to one of the areas of investigation. 	3, 7	2			
D. Extension <ul style="list-style-type: none"> ▶ Write an original story about obtaining transportation to a site after missing the last scheduled departure. 		8	10		
<ul style="list-style-type: none"> ▶ Investigate artists that feature a form of transportation and analyze the works in relation to the lifestyle of the time. 		6	5, 12		
<ul style="list-style-type: none"> ▶ Write an article and take photographs of the projects completed for publication in school newsletters and local newspapers. 	3	8		2, 9	

9-12

Statement L:

Current transportation systems consume natural resources and add to pollution and congestion.

Focus: As the chief engineer working for a firm, research and design an alternative form of transportation that uses renewable natural resources.

Links to Other Standards: Arts (Visual and Performing) 1.2, 1.3, 1.4, 1.6; Comprehensive Health and Physical Education 2.2; Language Arts Literacy 3.1–3.5; Mathematics 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11; Science 5.1, 5.2, 5.3, 5.4, 5.8, 5.9, 5.10, 5.11, 5.12; Social Studies 6.1, 6.4, 6.6, 6.7, 6.8, 6.9; World Languages 7.1

Sample Activities

A. Preparation: (See page 6-2)

B. Action: *The student will*

		List of CCWR Standards				
		1	2	3	4	5
<ul style="list-style-type: none"> Identify types of transportation systems currently available throughout the world. Communicate with a person in another part of the world using his or her other native language. 			1, 5			7
	<ul style="list-style-type: none"> Categorize renewable and nonrenewable energy sources that can be used in transportation. Prepare a graphic representation. 		2	9		
<ul style="list-style-type: none"> Research patents for transportation and fuel/energy devices and formulas. Determine which applications involve renewable resources. 			1, 5	5		
	<ul style="list-style-type: none"> Determine and present the economic, social, technological, natural resource, industrial, and political impacts of transportation on society. Investigate company policies and procedures related to employee commutation problems and issues. 	12	6	5, 14	10	



Sample Activities

List of CCWR Standards

	1	2	3	4	5
<ul style="list-style-type: none"> ▶ Investigate the safety concerns associated with using hydrogen as an alternative fuel. ▶ Describe how these concerns are being addressed and reach a class consensus as to whether the benefits outweigh the risks. 		5, 6, 10	3, 5	7	6
<ul style="list-style-type: none"> ▶ Apply the design-loop process to the design of an alternative transportation system that uses renewable natural resources. <p>Teacher Tip: <i>Group members apply for positions within the design team.</i></p>	9, 10	1, 9	15	2, 7	
<ul style="list-style-type: none"> ▶ Test the solutions and report the results. ▶ Prepare a design brief and role-play making a presentation to management. ▶ Evaluate each option and recommend one to be presented to the client. ▶ Create a rubric and evaluate the solution. 	7	8	8, 10, 13 14		
<ul style="list-style-type: none"> ▶ Research the potential that lubricant additives have in extending engine life and increasing fuel economies. ▶ Investigate the difference between using regular engine oil, engine oil with additives, and synthetic oils. ▶ Include an in-depth analysis of short- and long-term cost factors to the consumer. ▶ Develop a brochure “pitching” the best choice in engine lubrication. ▶ Develop a consumer survey and ask a number of individuals which product they use and why. ▶ Review the brochure with the consumer and record whether or not the marketing efforts have any impact on consumer behavior. 		2, 5, 9	1, 3, 5, 11, 13	2	7

List of CCWR Standards

1 2 3 4 5

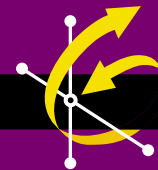
- | | | | | |
|------------|---|---|----|---|
| 2, 3, 5, 6 | 2 | 9 | 11 | 7 |
|------------|---|---|----|---|

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- | | | | | |
|---------|------|----|--|--|
| 3, 5, 7 | 6, 9 | 15 | | |
|---------|------|----|--|--|

- | | | | | |
|-------|------------|----|--|--|
| 5, 12 | 2, 4, 6, 8 | 15 | | |
|-------|------------|----|--|--|



Chapter 7

Instructional Adaptations for Students with Diverse Needs

In the interest of compliance with the Individuals with Disabilities Education Act (IDEA) of 1997 and Section 504 of the Rehabilitation Act of 1973, and in accordance with N.J.A.C. 6A:8-3.1(a)3, adaptations for students with disabilities are suggested in this section.

Adaptations for exceptionally able students are included in accordance with N.J.A.C. 6A:8-3.1(a)5.

In the interest of serving the needs of students with Limited English Proficiency (LEP), adaptations for LEP students are also suggested in this section.

Instructional Adaptations for Students with Disabilities

Introduction

The New Jersey Core Curriculum Content Standards and related curriculum frameworks are the focus of curriculum and instruction for all pupils. That population includes students with disabilities. To provide pupils with disabilities meaningful access to curriculum and instruction based on the content standards, adaptations may be required. The adaptations are not intended to compromise the content standards. Instead, adaptations provide students with disabilities the opportunity to maximize their strengths and compensate for their learning differences.



Figure 7.1

**RELATIONSHIP
BETWEEN THE
STANDARDS AND
FRAMEWORKS, THE
GENERAL EDUCATION
CURRICULUM, AND
IEPS**

***Individualized
Education
Programs
(IEPs)***

***General
Education***

***Core Curriculum Content
Standards and Curriculum
Frameworks***

Because students with disabilities are expected to participate in the general education curriculum, their individual education programs reflect the Core Curriculum Content Standards and the local school district's general education curriculum (see Figure 7.1).

The Federal Requirements

The Individuals with Disabilities Education Act (IDEA) amendments of 1997 and Section 504 of the Rehabilitation Act of 1973 guarantee students with disabilities the right to general education *program adaptations as specified in their Individual Education Programs (IEPs) or 504 plans*. The intent of the acts is to give these students access to the general education program and curriculum.

The term *adaptation*, in the context of the frameworks, is defined as any adjustment or modification to the general education program that enables students with disabilities to participate in, and benefit from, activities and experiences based on the Core Curriculum Content Standards and demonstrate understanding and application of the content standards. Such modifications may be those identified as *best practice*.

**Cross-Content Workplace
Readiness: Participation and
Benefits**

Students with disabilities demonstrate a broad range of learning, cognitive, communication, physical, sensory, and social/emotional differences that may necessitate adaptations to the general education program. Each pupil manifests his or her learning abilities, learning style,



and learning preferences in a unique way. Consequently, the types of adaptations needed and the programs in which the adaptations will be implemented are determined for each student within the Individualized Education Program (IEP) or 504 planning processes.

Cross-content workplace readiness requires different forms of participation. Instructional and physical adaptations are required for learning experiences in the classroom and in the community. Some adaptations may structure a student's learning in an explicit and systematic way, including the way in which instruction is presented and organized. For example, greater emphasis might be placed on foundation skills. Physical adaptations might be required to assist the student with tasks requiring dexterity and flexibility or the use of a variety of tools and materials. Physical adaptations might also be necessary to address safety considerations. Therefore, the teacher must understand the nature of the student's disability and access the individual education program.

Success for all is the goal. The following sections describe the types of adaptations that may be required. Also presented are best-practice strategies that are generally applicable to the enhancement of the special education student's access to the classroom and to learning and success.

Classroom Organization

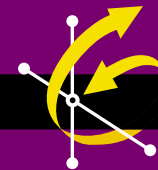
Students with disabilities may require specific adaptations that facilitate their participation in classroom activities. The classroom's organization and environment will maximize the students' participation and attention if the following needs are addressed:

- comfort
- interaction
- peer and adult communication
- independence
- mobility

Table 7.1

EXAMPLES OF ADAPTATIONS

Instructional Groups	Individual Support	Environmental Conditions	Adaptive Equipment
<ul style="list-style-type: none"> • Cooperative groups • Peer partners • Buddy system • Teams • Common interest 	<ul style="list-style-type: none"> • Assist physically • Clarify • Prompt/cue • Gesture/signal • Interpret • Reinforce • Highlight • Organize • Focus 	<ul style="list-style-type: none"> • Ventilation • Temperature • Sound • Lighting • Conference area • Storage accessibility • Labeled bins and cabinets <p>Safety:</p> <ul style="list-style-type: none"> • Clear pathways • Posted rules • Labeling • Distribution (materials) • Directions • Demonstrations • Role assignments • Timekeeping • Health/chemical • Equipment storage and use • Preparation and cleanup 	<ul style="list-style-type: none"> • Pump bottles • Revolving utensil holder • Books on tape • Directions on tape • Tape recorder • Tools with foam handles • Voice-activated recorder • Personal computer • PC software: e.g., <i>Ultimate Reader</i> (reads texts aloud on Internet) • Typography books (bas-relief) • Speech synthesizer • Communication board • Lap/drawing board • Closed-captioned videos and monitors • Braille materials • Large print materials • Low-vision equipment • Talking watch or clock • Calculator • FM system



Instructional Presentation

Instructional presentation adaptations can enhance a student's attention and ability to focus on instruction. The adaptations provide special education students with teacher-initiated and teacher-directed interventions that prepare students for learning and engage students in the learning process (*instructional preparation*); structure and organize information (*instructional prompts*); and foster understanding of new concepts and processes during classroom activities (*instructional applications*).

Note that many of these "adaptations" are simply good instructional practices, from which all students would benefit.

Table 7.2

PREPARATION, PROMPTS, AND APPLICATIONS

Preparation	Prompts	Applications
<p>Examples</p> <ul style="list-style-type: none"> • Relate to personal experience • Preview materials • Use organizing tools • Brainstorm/web • Use questioning techniques • Predict • Preteach vocabulary • Review strategy • Demonstrate • Illustrate • Use models • Provide a mini-lesson <p>Purpose</p> <ul style="list-style-type: none"> • Increase interest • Understand objectives/goals • Grasp key concepts • Recall • Use prior knowledge • Focus 	<p>Examples</p> <ul style="list-style-type: none"> • Graphic organizers • Semantic organizers • Outlines • Mnemonics • Analogies • Imagery • Color coding • Highlight/underline • Segment techniques and task analysis • Key words/labels • Repeat/clarify directions • Use cue cards, chalkboard, pictures, overhead • Movement cues <p>Purpose</p> <ul style="list-style-type: none"> • Organize information • Understand whole/part relations • Associate and connect cues • Grasp essential concepts • Classify • Compare • Recall • Summarize 	<p>Examples</p> <ul style="list-style-type: none"> • Hands-on activities • Constructions • Dramatization • Props/manipulatives • Illustrations • Flowcharts • Field trips • Guest speakers • Interviews/surveys • Life applications • Process modeling • Think aloud • Games/puzzles • Simulations <p>Purpose</p> <ul style="list-style-type: none"> • Simplify abstractions • Give concrete examples • Elaborate • Connections • Association • Relate to experience • Form generalizations • Use multiple modalities

Instructional Monitoring

Frequent monitoring of the performance and progress of students with disabilities is essential to ensure that students are, in fact, understanding and benefiting from learning activities. Monitoring provides teachers with a means of obtaining information about students and their ability to participate effectively in activities. Monitoring helps teachers determine when and how to adjust instruction and provides supports to promote student development. Equally important is student self-monitoring, self-evaluation, and self-management, which promote student self-reflection and self-direction regarding task demands, goal attainment, and performance accuracy.

Table 7.3

INSTRUCTIONAL MONITORING

Examples		Purpose
<ul style="list-style-type: none"> • Goal setting • Anecdotal recording • Progress graphs • Checklists/rubrics • Timelines • Journal entries • Portfolios • Videos • Audiotapes 	<ul style="list-style-type: none"> • Conference • Peer critiques • Student contracts • Systematic assessment 	<ul style="list-style-type: none"> • Periodic check for understanding • Progress checks • Redirect attention • Direct on-task behavior • Promote participation • Student goal setting • Reinforcement • Manage student behavior • Self-critique

Student Response

Student performance responses provide students with disabilities a means of demonstrating progress toward the lesson objectives related to the *Cross-Content Workplace Readiness Curriculum Framework* activities.

Table 7.4

RESPONSE PROCEDURES AND FORMATS

Response Procedures	Response Formats	
<ul style="list-style-type: none"> • Extend time • Provide practice exercises • Interpret/interpreter • Use preferred response mode (written, dictated, or oral) 	<ul style="list-style-type: none"> • Offer oral/written options • Maintain eye contact • Demonstrate • Peer-teach • Discuss 	<ul style="list-style-type: none"> • Make observations • Provide choices to students



Instructional Adaptations for Exceptionally Able Students

Gifted and Talented

Introduction

This section offers information on developing instructional adaptations for exceptionally able students. Required adaptations for exceptionally able students are supported by the section of the New Jersey Core Curriculum Content Standards titled, Implementation Issues: We must provide all students with appropriate challenges so that the raised expectations for all students do not result in lowered expectations for the exceptionally able.”

Additionally, New Jersey Administrative Code — N.J.A.C. 6A:8-3.1(a)5 — requires that “district boards of education shall be responsible for indentifying gifted and talented students and shall provide them with appropriate instructional adaptations and services.”

Suggestions for serving the needs of these students are offered in the following categories: the identification process, adaptation strategies, and educational planning.



Adaptations for Exceptionally Able Students

Curricular adaptations, also referred to as differentiating the curriculum, refers to appropriate adjustments to curriculum content, teaching strategies, expectations of student mastery, and scope and sequence.

Adaptation strategies include the following:

- ▶ interdisciplinary and problem-based assignments with planned scope and sequence
- ▶ advanced, accelerated, or compacted content
- ▶ abstract and advanced higher-level thinking
- ▶ allowance for individual student interests
- ▶ assignments geared to development in the areas of affect, creativity, cognition, and research skills
- ▶ complex, in-depth assignments
- ▶ diverse enrichment that broadens learning
- ▶ variety in types of resources used
- ▶ community involvement
- ▶ cultural diversity
- ▶ internships, mentorships, and other forms of apprenticeship

Adaptation categories include the following: acceleration, enrichment, and grouping. The next several pages identify a variety of adaptive efforts within these categories.

Process for the Identification of Exceptionally Able Students

Exceptionally able (gifted) students are those who:

- demonstrate a high degree of intellectual, creative, and/or artistic ability(ies),
- possess exceptional leadership skills,
- excel in specific field (e.g., as athlete, entrepreneur),
- function above grade level,
- need accommodation or special instruction and/or services to achieve at levels commensurate with a challenge to their abilities.

The characteristics of exceptionally able students include, but are not limited to, the following:

- ability to grasp concepts rapidly and/or intuitively
- intense curiosity about principles and how things work
- ability to generate theories and hypotheses and to pursue methods of inquiry
- produce products that express insight, creativity, and/or excellence
- pose questions beyond those presented in the Core Curriculum Content Standards

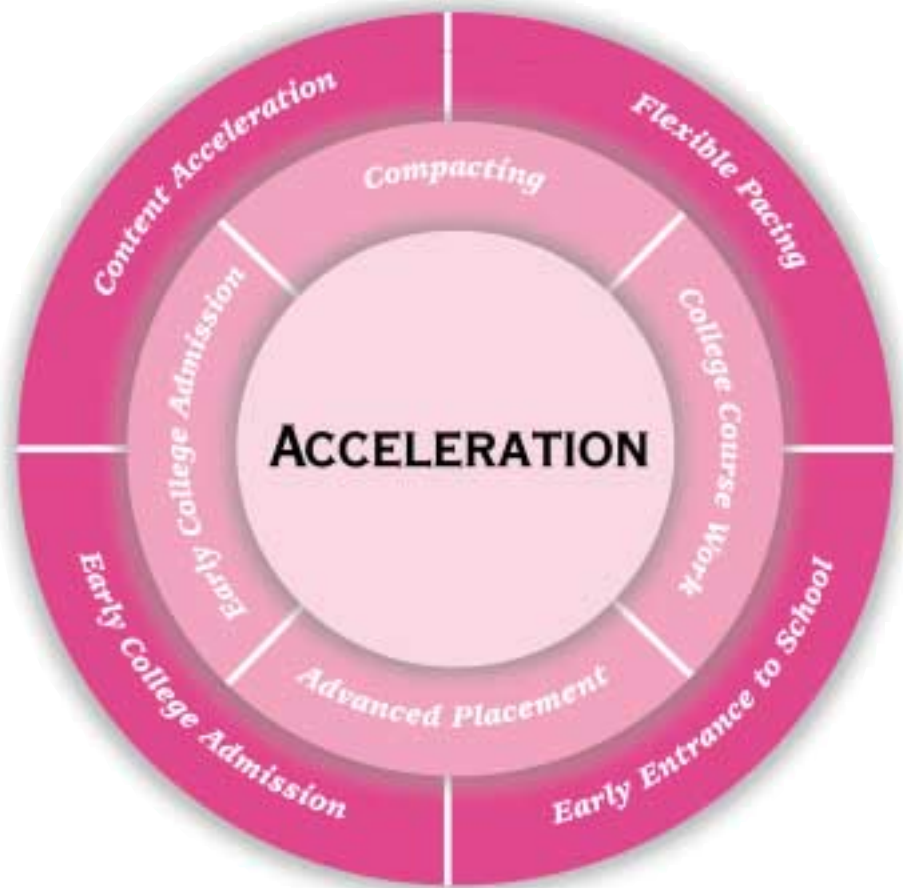
The process of identification is ongoing. Students are continuously entering and exiting school districts. Fluidity should be maintained as students' needs change each year. Identification and appropriate educational challenges should be initiated in kindergarten and reviewed annually through grade 12 (N.J.A.C. 6A:8-3.1(a)5i). Identification practices should be in place at the time of school enrollment. When a separate or pullout program is maintained, the selection of nominees should be determined by a committee of at least three to five individuals to maintain a fair and democratic process.

The identification process should reasonably identify three percent to five percent of the school population through multiple criteria:

- aptitude discovered through testing, special projects, teacher observation, student interest and motivation, and state or national standardized assessments
- teacher recommendation
- self, peer, and/or parent nomination

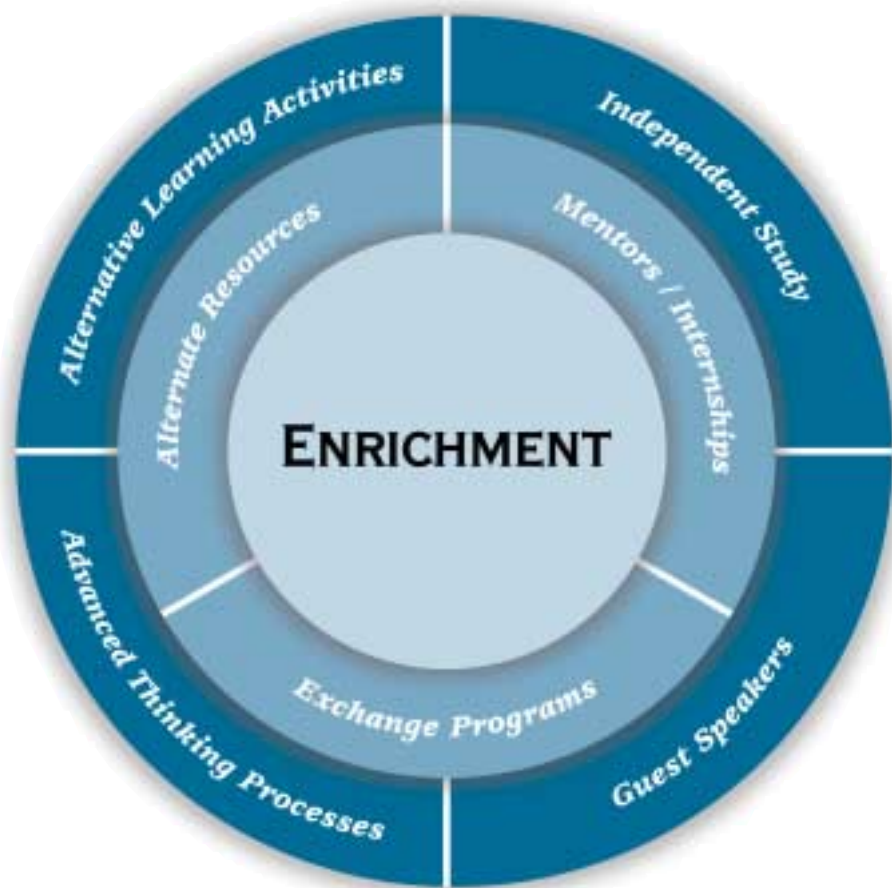


- **Flexible pacing:** Assignment to classes should be based on the ability to be challenged and handle the work, not based on age.
- **Content acceleration:** Superior performance in some areas may be addressed with placement in a higher grade level for the areas warranting it.
- **Early entrance to school:** Eligibility should be evaluated in terms of the following: (1) degree of advancement in relation to peers; (2) number of areas of advanced achievement; (3) the student's self-concept. (The percentage of students attending one to three years of preschool has increased dramatically and should be considered.)
- **Multiage classes:** Classes in which two or more grade levels are combined. Students can accelerate through self-pacing.
- **Compacting (also known as telescoping):** Refers to a form of acceleration in which part of the curriculum is covered in a shorter period of time than is usual. Previously mastered content is determined through pre-evaluation and eliminated.
- **College course work:** Qualified students take college courses for college credit while completing high school requirements (concurrent enrollment). College courses may be taken in the summer.
- **Early college admission:** Once the standards for high school are met, early admission to college is an option. Students may leave high school early and enter college.
- **Advanced placement:** The advanced placement program (APP), administered by the College Entrance Examination Board, enables high school students to obtain both high school and college credit for demanding course work offered as part of the school curriculum.



Acceleration

Acceleration involves grade-skipping or changing the rate of presentation of the general curriculum to enable the student to complete the program in less time than usually required. Prescribed seat-time is not necessary for achievement of the standards. Acceleration can occur in any subject area. Middle school students should be able to take high school courses or high school students take college courses with appropriate credit accrued. Some provision must be made for continued acceleration or high-level enrichment. Unless the student has a pre-identified problem, social or emotional development should not inhibit acceleration.



Enrichment

Enrichment is another way to meet the differentiated needs of exceptionally able students. Well-articulated assignments that require higher cognitive processing, in-depth content, and alternative modes of communication can be effective and stimulating

- **Alternative learning activities/units:** Opportunities to pursue alternative activities permit students to engage in new learning and avoid the boredom of repetitive instruction or unnecessary practice in skills already mastered.
- **Independent study:** Students conduct carefully planned, self-directed research projects which are carefully monitored by the teacher. Prerequisites include instruction in field-based and library research skills, the scientific method, and other authentic types of inquiry.
- **Advanced thinking processes:** Assignments in all curriculum areas should emphasize higher-level thinking skills such as synthesis, analysis, and evaluation.
- **Guest speakers:** University faculty, parents, business and industry leaders, or other teachers can provide information on topics beyond the teacher's expertise.
- **Mentors/internships:** Both mentors and internships allow students to interact with adult experts in their fields of interest and to increase their awareness of potential careers. Mentors act as role models.
- **Alternate resources:** Alternate resources may include materials from a higher grade level or business, university, and community resources such as laboratories, libraries, and computer facilities.
- **Exchange programs:** Students attend schools in a different community or country to enrich their educational experiences.



- **Self-contained classes:** Self-contained classes enable exceptional students to be challenged in every area throughout the day and week, to be stimulated by their intellectual peers, and to have guidance from teachers with experience in a sequential, integrated curriculum for the exceptionally able.
- **Pullout programs:** Pullout programs combine regular class integration and homogeneous grouping on a part-time, regular basis. Pullout programs require careful coordination and communication between the teachers of both classes.
- **Cluster grouping in the regular classroom:** This type of grouping permits homogeneous and heterogeneous grouping according to interests and achievement.
- **Cluster scheduling:** Schedules are arranged so that exceptionally able students can take their required core courses together to enhance rapid pacing, require less drill, and allow greater depth and breadth.
- **Honors and enrichment classes:** These classes provide opportunities for practicing higher-level thinking skills, creativity, and exploration of in-depth course content.
- **Seminars:** Aimed at research, interdisciplinary studies, visual and performing arts, academic subjects, or other areas of interest, seminars provide interaction with specialists who can give guidance in specific areas.
- **Resource centers:** A district can establish a resource center available to all students but reserve it at times for exceptionally able students from a broader geographical area (e.g., interdistrict or county-wide).



Grouping

Grouping involves placing students of like ability together in homogeneous arrangements such as special classes or clustering in the same classroom. Grouping allows for more appropriate, rapid, and advanced instruction and challenges students without isolating them.

EDUCATIONAL PLAN FOR AN EXCEPTIONALLY ABLE STUDENT

STUDENT _____ H.R. _____ Date _____
Birthdate _____ Age _____ Grade _____
Address _____ Zip _____

INITIAL ASSESSMENT INFORMATION [National norms/percentiles]

Group Achievement Tests: Date _____ Individual Achievement Test: Date _____
Name: _____ Name _____

Subtest	Percentile	Subtest	Percentile
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

INDICATORS OF MASTERY OF CCCS IN _____ :
(Subject)

MONITORED BY:

Parent: _____ Teacher: _____
Counselor: _____ Administrator: _____

CONSIDERATIONS/INTERESTS: _____

SPECIAL NEEDS/ADAPTATIONS: _____

EXPECTATIONS/OBJECTIVES: _____

RECOMMENDED FUTURE PLAN: _____

PERMISSION TO PARTICIPATE: _____ (Parent)
Date _____



Instructional Adaptations for Students with Limited English Proficiency

Introduction

Students with Limited English Proficiency (LEP) come to school with diverse linguistic and cultural backgrounds. They bring differences in physical, social, and intellectual abilities. Some are refugees who have experienced traumatic hardships. Learning a language means learning to speak, listen, read, and write with clarity and understanding — all of which rely upon thinking in a new language. The students' level of literacy in their first language and their prior mastery of the subject must be considered. The task is daunting for the students. The number of LEP students is increasing, and familiarity with the strategies on the following pages will help to smooth the way for teacher and learner. When adaptations are not provided, instruction will not be effective and the student will not benefit.

The purpose of adaptations is to reduce the complexity of the language, not the depth of the subject content. By lowering the language barrier and making the lessons as comprehensible as possible, the student's ability to understand is increased. Two factors will influence the student's ability: (1) the level of familiarity the student has with the content; and (2) the degree to which the content is given meaning through visual materials, e.g., pictures, charts, and diagrams. Nonlinguistic cues enable the student to comprehend the material and the teacher's messages.

The goal is to lower the language barrier by making the classroom communication simple, clear, and meaningful to the student. Students may sound fluent in a social setting but have difficulty with "academic" language. Students will go through a stage of silence, then mimicking, before using the language spontaneously.

The following pages include specific recommendations to ease the task of teaching content and skills to LEP students and to facilitate student learning.



Table 7.5

ADAPTATIONS FOR LEP STUDENTS

Prepare for Student	Prepare Instruction
<ol style="list-style-type: none"> 1. Learn about the student's background. 2. Work with the LEP/bilingual teacher to identify key objectives, skills, and concepts before introducing a unit. 3. Plan a lesson that is culturally and linguistically appropriate. 4. Create flexible small groups based on interests, need, or ability. 5. Give clear simple directions. 6. Students retell in their own words before attempting the task. 7. The teacher leads the lesson; the bilingual teacher then provides background, examples, or other support to the lesson. 8. The bilingual teacher reiterates key concepts in simple English or in the student's first language. 9. Reorganize/reinforce information. 10. Provide bilingual resources. 	<ol style="list-style-type: none"> 1. Eliminate peripheral information. 2. Be clear and concise. 3. Translate the abstract to the concrete. 4. Consult the LEP/bilingual teacher for guidance. 5. Build background information with <ul style="list-style-type: none"> • brainstorming • semantic webbing • maps, graphics, photographs, illustrations • videos, film 6. Use KWL chart: Students consider what they <ul style="list-style-type: none"> • Know • Want to learn • Learned 7. Slowly expand the amount of material to be learned.

Teaching Strategies

1. Simplify vocabulary/sentence structure.
2. Provide concrete examples with hands-on activities.
3. Elaborate understanding using "thinking aloud" and demonstrations.
4. Emphasize key words and phrases; use intonation and repetition.
5. Build associations and connections between the new and the known.
6. Use variety when presenting materials: oral, visual, graphic, etc.
7. Elaborate on figurative language and idiomatic expressions.
8. Summarize on the chalkboard or with transparencies as you speak and model.

Continued on next page



Table 7.5 (continued)

ADAPTATIONS FOR LEP STUDENTS

Enhance Vocabulary		Presentation
<ol style="list-style-type: none"> 1. Start a picture dictionary or file. 2. Teach vocabulary appropriate to a given subject before content. 3. Report, reinforce, and review vocabulary during content activities. 4. Label objects in the room. 5. Tape vocabulary words in context for sound recognition. 6. Use real objects with words where possible. 7. Encourage dictionary use for word meaning. 		<ol style="list-style-type: none"> 1. Maintain consistent classroom procedures/routines for prediction and comfort level. 2. Use verbal and nonverbal communication to communicate expectations. 3. Routine expectations such as checking homework or going to the office for a late slip should be shared upon arrival. 4. Assign buddies/peer tutors to assist with acclimation to the school and to school routines.
Hands-On Activities		
<ul style="list-style-type: none"> ▶ graphic organizers ▶ posters ▶ games ▶ puzzles ▶ labeling simulations ▶ student-made flash cards 	<ul style="list-style-type: none"> ▶ vocabulary ▶ word banks ▶ charts ▶ graphs ▶ surveys ▶ interviews ▶ drawing/illustrating ▶ student-made books ▶ language experience books 	<ul style="list-style-type: none"> ▶ response journals ▶ tape recordings ▶ role playing and drama

Continued on next page

Table 7.5 (continued)**ADAPTATIONS FOR LEP STUDENTS**

Check for Student Understanding	Questioning Strategies
<ol style="list-style-type: none"> 1. Check student understanding periodically. 2. Promote participation. 3. Check understanding of assignments, directions, instruction. 4. Use visual reviews with lists and charts. 5. Break tasks into sequential parts. 6. Help students learn to “think aloud.” 7. Allow for translation time; questions need “wait time.” 8. Rephrase for understanding. 	<ol style="list-style-type: none"> 1. Questions structured to student language level; begin with yes/no questions and progress to advanced open-ended questions. 2. Ask a new student to point to a picture or a word to demonstrate knowledge. 3. Using visual cues, ask simple yes/no questions; e.g., “Is this a pencil?” 4. Ask either/or questions in which the answer is embedded: e.g., “Is this a pencil or a crayon?” 5. Break complex questions into several steps: e.g., “Look at the picture. Point to the boy. Is he jumping?” 6. Avoid the negative when questioning. 7. Ask simple “how” and “why” questions that can be answered with a short phrase or sentence. 8. Do not require that students speak in full sentences until that level of proficiency is reached. 9. Tell the student in advance which question she or he will be responding to, thus allowing for response practice.



Appendix A

Research and Theory

The following research may help the educator design activities with students. Further research is available from web sites that are cited in this document.

Multiple Intelligences

In *Frames of Mind: A Theory of Multiple Intelligences*, Howard Gardner (1983) wrote that a study of children's growth and development suggests a number of distinct intelligences (related to patterns of thinking or thinking styles).

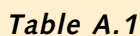
- ▶ **Linguistic:** Sensitivity to the order and meanings of words; sounds, rhythms, inflections, and meters of words; and the function of words: to excite, convince, stimulate, convey information, or simply to please.
- ▶ **Logical-mathematical:** The ability to appreciate the actions performed upon objects (confronting, ordering/reordering) and assessment of quality relations among those actions; statements/propositions about actual or potential actions and the relationships among those statements.
- ▶ **Spatial:** The capacity to perceive the visual world accurately; to perform transformations and modifications upon one's initial perceptions; and to be able to recreate aspects of one's visual experience, even in the absence of relevant physical stimuli. Sensitivity to patterns, forms, and the whole.
- ▶ **Bodily-kinesthetic:** Use of the body as an object to express self and feelings; aspirations/use of body parts (including hands) to arrange, transform, and manipulate objects in the world.
- ▶ **Musical:** The ability to discern meaning and importance in sets of pitches rhythmically arranged and also to produce such metrically arranged pitch sequences as a means of communicating to other individuals.
- ▶ **Interpersonal:** The external aspect of a person: the ability to notice and make distinctions among other individuals—in particular, their moods, temperaments, motivations, and intentions.

- ▶ **Intrapersonal:** The internal aspects of a person: the capacity to effect discriminations among feelings, range of affects, or emotions, and to label them, enmesh them with symbolic codes, and draw upon them to understand and guide one's own behavior.
- ▶ **Naturalist:** The ability to identify and classify patterns in nature. The person has the ability to relate to the surroundings and the role each part of your surroundings play.
- ▶ **Existential:** The sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

Taxonomy of Instructional Verbs and Tasks

(reprinted from the *New Jersey Visual and Performing Arts Curriculum Framework* [Winter 1999])

The words we use to instruct in the classroom should be carefully chosen. Lesson plans and instruction should be scrutinized for the use of appropriate, instructive verbs and tasks that elevate a child's cognitive functioning. Bloom's taxonomy of thinking skills identifies some of these instructional verbs and tasks/products and places them in a five-tiered table (with *recall* as the lowest level and *evaluation* as the highest level). Since the standards require that all students be challenged to reach their maximum potential, the higher- or lower-functioning students can be assigned higher- or lower-level task challenges using Bloom's taxonomy...("A Taxonomy of Educational Objectives" conference presentation by Benjamin S. Bloom, 1949).



RECALL*		APPLICATION		ANALYSIS	
Verbs	Products	Verbs	Products	Verbs	Products
list	label	show	photograph	summarize	questionnaire
identify	name	apply	illustration	abstract	survey
locate	list	translate	diagram	classify	report
memorize	definition	illustrate	collection	dissect	graph/chart
review	fact	record	map	compare	outline
match	test	teach	puzzle	deduce	diagram
reproduce	reproduction	construct	model	order	conclusion
name	recitation	demonstrate	diary	investigate	list
read			report	differentiate	plan
recall			lesson	categorize	summary
				separate	catalog
SYNTHESIS			EVALUATION		
Verbs	Products	Verbs	Products	Verbs	Products
compose	film	decide	conclusion	decide	conclusion
imagine	formula	rate	judgment	rate	judgment
infer	invention	evaluate	panel	evaluate	panel
hypothesize	poem	dispute	opinion	dispute	opinion
invent	prediction	discuss	verdict	discuss	verdict
create	project	verify	scale	verify	scale
estimate	new game	judge	value	judge	value
produce	story	grade	recommendation	grade	recommendation
forecast	machine	choose		choose	
design	media	assess		assess	
predict		select		select	
*knowledge/comprehension					

E. Paul Torrance (1962) in *Guiding Creative Talent* described student behaviors and cognitive skills identified with the creative thinker. The factors and behaviors below are characteristic of creative thinkers.

- ▶ **Fluency and Flexibility:** Thinks about many things; generates lots of ideas; is a divergent thinker; creates many characters; sees various viewpoints; and sees things in a humorous perspective.
- ▶ **Originality:** Is unique and intuitive; comes up with original ideas; finds clever solutions to problems; and suggests unique methods and novel innovations.
- ▶ **Elaboration:** Embellishes jokes and stories; adds detail; expands ideas; builds on; embroiders.
- ▶ **Risk Taking:** Is courageous and daring; experiments and explores possibilities; risks failure; and tries new approaches and tasks.
- ▶ **Complexity:** Organizes unrelated data; recognizes relationships; restructures; and encapsulates visual and verbal presentations.
- ▶ **Curiosity:** Wonders; follows hunches; ponders outcomes; pursues inquiry; questions; and puzzles over people's reactions.
- ▶ **Imagination:** Fantasizes; daydreams; thinks up characters and story lines; visualizes change; and imagines images and events.



Appendix B

Cross-Content Workplace Readiness Standards and Indicators

Cross-Content Workplace Readiness Standards

Standard 1: ALL STUDENTS WILL DEVELOP CAREER PLANNING AND WORKPLACE READINESS SKILLS.

Descriptive Statement: Students will be expected to develop the skills to seek, obtain, maintain, and change jobs. These skills are critical to each student's future ability to navigate in the complex world of work. Prior to leaving school, each student should possess the skills needed to sustain him/herself as an adult in the labor force.

Cumulative Progress Indicators:

- 1.1 Demonstrate employability skills and work habits, such as work ethic, dependability, promptness, and getting along with others, needed to get and keep a job.
- 1.2 Describe the importance of personal skills and attitudes to job success.
- 1.3 Identify career interests, abilities, and skills.
- 1.4 Develop an individual career plan.
- 1.5 Identify skills that are transferable from one occupation to another.
- 1.6 Select a career major and appropriate accompanying courses.
- 1.7 Describe the importance of academic and occupational skills to achievement in the work world.
- 1.8 Demonstrate occupational skills developed through structured learning experiences, such as volunteer, community service, and work-based experiences or part-time employment.
- 1.9 Identify job openings.
- 1.10 Prepare a resume and complete job applications.
- 1.11 Demonstrate skills and attitudes necessary for a successful job interview.
- 1.12 Demonstrate consumer and other financial skills.

Standard 2: ALL STUDENTS WILL USE INFORMATION, TECHNOLOGY, AND OTHER TOOLS.

Descriptive Statement: Students will be expected to develop skills in the use of information, up-to-date educational technology, and other tools to improve learning, achieve goals, and produce products and presentations. They will learn to develop, locate, summarize, organize, synthesize, and evaluate information. Students will be expected to use technological tools, such as telecommunications networking, for problem-solving, writing, and research.

Cumulative Progress Indicators:

- 2.1 Understand how technological systems function.
- 2.2 Select appropriate tools and technology for specific activities.
- 2.3 Demonstrate skills needed to effectively access and use technology-based materials through keyboarding, troubleshooting, and retrieving and managing information.
- 2.4 Develop, search, and manipulate databases.
- 2.5 Access technology-based communication and information systems.
- 2.6 Access and assess information on specific topics using both technological (e.g., computer, telephone, satellite) and print resources available in libraries or media centers.
- 2.7 Use technology and other tools to solve problems, collect data, and make decisions.
- 2.8 Use technology and other tools, including word-processing, spreadsheet and presentation programs, and print or graphic utilities, to produce products.
- 2.9 Use technology to present designs and results of investigations.
- 2.10 Discuss problems related to the increasing use of technologies.



Standard 3: ALL STUDENTS WILL USE CRITICAL THINKING, DECISION-MAKING AND PROBLEM-SOLVING SKILLS.

Descriptive Statement: Students will be expected to develop original thoughts and ideas, think creatively, develop habits of inquiry, and take intellectual and performance risks. They will be expected to recognize problems, devise a variety of ways to solve these problems, analyze the potential advantages and disadvantages of each alternative, and evaluate the effectiveness of the method ultimately selected.

Cumulative Progress Indicators:

- 3.1 Recognize and define a problem, or clarify decisions to be made.
- 3.2 Use models, relationships, and observations to clarify problems and potential solutions.
- 3.3 Formulate questions and hypotheses.
- 3.4 Identify and access resources, sources of information, and services in the school and the community.
- 3.5 Use the library media center as a critical resource for inquiry and assessment of print and nonprint materials.
- 3.6 Plan experiments.
- 3.7 Conduct systematic observations.
- 3.8 Organize, synthesize, and evaluate information for appropriateness and completeness.
- 3.9 Identify patterns and investigate relationships.
- 3.10 Monitor and validate their own thinking.
- 3.11 Identify and evaluate the validity of alternative solutions.
- 3.12 Interpret and analyze data to draw conclusions.
- 3.13 Select and apply appropriate solutions to problem-solving and decision-making situations.
- 3.14 Evaluate the effectiveness of various solutions.
- 3.15 Apply problem-solving skills to original and creative/design projects.

Standard 4: ALL STUDENTS WILL DEMONSTRATE SELF-MANAGEMENT SKILLS.

Descriptive Statement: Students will be expected to address issues related to personal development, such as accepting responsibility for their own learning and understanding expectations for performance. They are also expected to demonstrate positive work behaviors and ethics, the ability to work individually and cooperatively in groups, and respect for others of diverse cultural and social backgrounds.

Cumulative Progress Indicators:

- 4.1 Set short and long term goals.
- 4.2 Work cooperatively with others to accomplish a task.
- 4.3 Evaluate their own actions and accomplishments.
- 4.4 Describe constructive responses to criticism.
- 4.5 Provide constructive criticism to others.
- 4.6 Describe actions that demonstrate respect for people of different races, ages, religions, ethnicity and gender.
- 4.7 Describe the roles people play in groups.
- 4.8 Demonstrate refusal skills.
- 4.9 Use time efficiently and effectively.
- 4.10 Apply study skills to expand their own knowledge and skills.
- 4.11 Describe how ability, effort, and achievement are interrelated.

**Standard 5: ALL STUDENTS WILL APPLY SAFETY PRINCIPLES.**

Descriptive Statement: Safety is an important component of all content areas, especially the arts, health and physical education, science, occupational education programs, and any content area where hands-on activities take place. Students need to learn behaviors that will ensure their own safety and health and that of others. They also should become familiar with the rules and laws governing safety and health so that they can act responsibly and implement these standards.

Cumulative Progress Indicators:

- 5.1 Explain how common injuries can be prevented.
- 5.2 Develop and evaluate an injury prevention program.
- 5.3 Demonstrate principles of safe physical movement.
- 5.4 Demonstrate safe use of tools and equipment.
- 5.5 Identify and demonstrate the use of recommended safety and protective devices.
- 5.6 Identify common hazards and describe methods to correct them.
- 5.7 Identify and follow safety procedures for laboratory and other hands-on experiences.
- 5.8 Discuss rules and laws designed to promote safety and health, and their rationale.
- 5.9 Describe and demonstrate procedures for basic first aid and safety precautions.

Cross-Content Workplace Readiness Indicator Descriptive Statements

Standard 1: ALL STUDENTS WILL DEVELOP CAREER PLANNING AND WORKPLACE READINESS SKILLS.

Indicator 1: Demonstrate employability skills and work habits.

- ▶ Students will demonstrate reliable work behavior, which includes being consistently punctual, maintaining regular attendance, completing tasks effectively, meeting assignment deadlines, following the chain of command, and following rules and grievance procedures.
- ▶ Students will demonstrate positive work attitudes such as initiative, self-confidence, patience, dependability, honesty and integrity, confidentiality, emotional maturity, willingness to learn, pride in work, and loyalty to the employer.
- ▶ Students will exhibit good interpersonal skills which include being courteous; showing respect and empathy for others; cooperating with and assisting others; accepting and following directions; performing as a team member; and showing respect for cultural diversity, individuals in nontraditional jobs, and physically and mentally challenged individuals.
- ▶ Students will maintain an image appropriate to the employment situation.

Indicator 2: Describe the importance of personal skills and attitudes to job success.

- ▶ Students will describe the relationship between the positive work attitudes and personal skills listed under indicator 1 and success on the job.

Indicator 3: Identify career interests, abilities and skills.

- ▶ Students will complete activities to determine career interests. Activities include completing assessment instruments that help the learner identify his/her own interests, abilities, and skills as they might apply to career choices. Students will verify abilities through awareness, exploratory, and career-counseling activities and classes. Examples include activities that help students make decisions on career opportunities based on such factors as economic rewards, economic security, personal security, physical surroundings and facilities, manual dexterity, involvement with people, emotional climate, interpersonal relations, leadership responsibilities, independence, advancement opportunities, use of creativity, intellectual stimulation, etc.



Indicator 4: *Develop an individual career plan.*

- ▶ Students will develop and maintain a portfolio that documents their activities and skills as well as the results of the interest and ability assessments used to make career decisions. The portfolio will include specific information on structured learning experiences.
- ▶ Students will develop a career plan, including tentative plans for participation in courses and activities in secondary and postsecondary articulated programs.

Indicator 5: *Identify skills that are transferable from one occupation to another.*

- ▶ Students will identify employability skills and occupational skills that are common to multiple occupations and clustered disciplines, focusing on critical-thinking, decision-making and problem-solving skills.

Indicator 6: *Select a career major and appropriate accompanying courses.*

- ▶ Students will explore career interests within, but not limited to, one or more of the following clustered disciplines linked to the Core Curriculum Content Standards: Arts and Humanities; Business and Information Systems; Mathematics, Science and Technology; and Health and Human Services.

Indicator 7: *Describe the importance of academic and occupational skills to achievement in the work world.*

- ▶ Students will recognize the need for learning academic and occupational skills required for success in employment (see the first bullet under indicator 8).

Indicator 8: *Demonstrate occupational skills developed through structured learning experiences, such as volunteer, community service, and work-based experiences or part-time employment.*

- ▶ Students will demonstrate occupational skills such as reading policy documents, log books, training materials, safety manuals, e-mail, and other operational correspondence; writing technical documents; using calculators, graphs, and statistics; and working cooperatively to solve problems.
- ▶ Students will elect to participate in structured learning experiences as rigorous activities integrated into the curriculum and linked to the Core Curriculum Content Standards; elect to participate in selected cocurricular or extracurricular activities; or elect to participate in external experiences such as volunteer activities, community service, paid or unpaid employment opportunities, or an apprenticeship program.

- Indicator 9:** *Identify job openings.*
- ▶ Students will research job availability through personal contacts, use of printed materials, and use of the Internet or other information-processing systems.
 - ▶ Students will use resources available through the One-Stop Career Centers.
- Indicator 10:** *Prepare a resume and complete job applications.*
- ▶ Students will develop a resume in an acceptable business format, a sample letter of application, and an application form for a real or sample position. Materials should be developed using appropriate technology (e.g., scanners, Internet, electronic submissions).
- Indicator 11:** *Demonstrate skills and attitudes necessary for a successful job interview.*
- ▶ Students will dress appropriately for the interview, research and prepare possible questions to be asked in an interview, and perform the necessary steps to complete a successful job interview. Students will also demonstrate a professional demeanor appropriate to the job setting.
- Indicator 12:** *Demonstrate consumer and other financial skills.*
- ▶ Students will develop a personal budget, plan for investments and savings, and explain the relationship between the use of credit and future spending and credit rating.
 - ▶ Students will demonstrate the ability to use current technology to write checks, make deposits, and perform other banking procedures necessary in everyday life.
 - ▶ Students will select goods and services consistent with budgetary limits; values; needs; goals; durability, safety, and reliability standards; and market analysis information.
 - ▶ Students will exercise consumer rights and responsibilities.
 - ▶ Students will demonstrate entrepreneurial skills and practices.
 - ▶ Students will demonstrate skills appropriate to a job setting, for example, cost analysis skills and fiscal responsibility.



Standard 2: ALL STUDENTS WILL USE INFORMATION, TECHNOLOGY AND OTHER TOOLS.

Notes on Technology Use

Technology is playing an increasingly important role in education. Its definition includes three disciplines: educational technology, technology education, and information technology. *Educational technology* is the use of technology to acquire, manage, and communicate information as an integral part of the learning process. Technology education refers to the study of technology and applications of the design process using materials, tools, and resources to produce a product. *Information technology* deals with the management and interpretation of information and includes organizing and creating a process to manipulate information. Standard 2 encompasses all three disciplines.

Students will use *educational technology* (which includes but is not limited to computers, calculators, and video and audio devices) appropriately as learning, research, and communication tools. Educational technology also includes information processing. It requires all students to acquire the current technology-based research skills necessary to manage, access, locate, select, organize, analyze, research, and disseminate information electronically. It also requires that students collaborate using the electronic tools of the work force.

Technology education focuses on the design process, the development and application of technologies, and the effect technology has on individuals, society, and the environment. Included is the understanding of technological systems, both open and closed. Technological systems are composed of material process, energy, and information systems.

Indicator 1: Understand how technological systems function.

- ▶ Students will explain, design, and create their own solutions to practical problems.
- ▶ Students will classify systems as open-loop or closed-loop systems.
- ▶ Students will determine whether the system can process materials, energy, and information.

Indicator 2: Select appropriate tools and technology for specific activities.

- ▶ Students will apply selected criteria to choose and use the appropriate tools and technology in a given situation.

- Indicator 3:** *Demonstrate skills needed to effectively access and use technology-based materials through keyboarding, troubleshooting, and retrieving and managing information.*
- ▶ Students will produce a finished product such as a newsletter, a multimedia presentation, a product label, a model, or a structure using technological equipment and processes.
- Indicator 4:** *Develop, search, and manipulate databases.*
- ▶ Students will use computer data programs to record, process, and disseminate information.
- Indicator 5:** *Access technology-based communication and information systems.*
- ▶ Students will disseminate information and communicate ideas effectively through a variety of technological systems.
- Indicator 6:** *Access and assess information on specific topics using both technological (e.g., computer, telephone, satellite) and print resources available in libraries or media centers.*
- ▶ Students will select and use both technological products and services and print materials to research, retrieve, assess, and report appropriate information from a variety of media available in classrooms, libraries, and media centers.
- Indicator 7:** *Use technology and other tools to solve problems, collect data, and make decisions.*
- ▶ Students will use the tools, materials, procedures, and data available to arrive at multiple solutions to problems. Students will choose the best solution based on goals and consequences.
- Indicator 8:** *Use technology and other tools, including word-processing, spreadsheet and presentation programs, and print or graphic utilities, to produce products.*
- ▶ Students will use the tools, materials, procedures, and data available to produce a product.
- Indicator 9:** *Use technology to present designs and results of investigations.*
- ▶ Students will develop and present designs, results, and solutions to a variety of audiences using the appropriate technology.
- Indicator 10:** *Discuss problems related to the increasing use of technologies.*
- ▶ Students will describe the benefits of technology, assess the trade-offs and risks associated with the design and implementation of technological solutions, make rational decisions about technological issues, and relate the increased use of technological systems to future development.



Standard 3: ALL STUDENTS WILL USE CRITICAL THINKING, DECISION-MAKING, AND PROBLEM-SOLVING SKILLS.

Indicator 1: *Recognize and define a problem, or clarify decisions to be made.*

- ▶ Students will complete the initial steps in solving a problem and making a decision, which include identifying and explaining the problem.

Indicator 2: *Use models, relationships, and observations to clarify problems and potential solutions.*

- ▶ Students will select appropriate models, data, and observations related to the problem and its projected solutions.

Indicator 3: *Formulate questions and hypotheses.*

- ▶ Students will identify issues and concerns that help to define the problem and develop hypotheses.

Indicator 4: *Identify and access resources, sources of information, and services in the school and the community.*

- ▶ Students will select and use products, information, and services available through the school and the community.

Indicator 5: *Use the library media center as a critical resource for inquiry and assessment of print and nonprint materials.*

- ▶ Students will use library media centers as sources of print and nonprint materials. Students will use the materials to research a topic or an idea and will assess the value and reliability of the information source.

Indicator 6: *Plan experiments.*

- ▶ Students will develop experiments to solve a problem. Students will define the materials and equipment needed to conduct the experiment, the type of environment, and the length of time required, and the safety precautions to be followed in performing the experiment.

Indicator 7: *Conduct systematic observations.*

- ▶ Students will record data using appropriate criteria and equipment at specified intervals as defined in the experiment plan. Students will conduct subsequent experiments as necessary to verify the data.

Indicator 8: *Organize, synthesize, and evaluate information for appropriateness and completeness.*

- ▶ Students will organize the data collected from the experiment, compare results, and evaluate the conclusions for appropriateness and completeness.

- Indicator 9:** *Identify patterns and investigate relationships.*
- ▶ Students will recognize the patterns in and explore the relationships among data or events.
- Indicator 10:** *Monitor and validate their own thinking.*
- ▶ Students will analyze data or situations/circumstances and each will evaluate his or her own thinking in relation to the information. Students will conduct self-assessments.
- Indicator 11:** *Identify and evaluate the validity of alternative solutions.*
- ▶ Students will identify possible solutions and examine the pros and cons of each.
- Indicator 12:** *Interpret and analyze data to draw conclusions.*
- ▶ Students will draw conclusions by comparing data.
- Indicator 13:** *Select and apply appropriate solutions to problem-solving and decision-making situations.*
- ▶ Students will evaluate possible solutions, determine the appropriateness of each, and apply the best solution(s) in a given situation.
- Indicator 14:** *Evaluate the effectiveness of various solutions.*
- ▶ Students will gather peer, adult, and self-assessments based on the implementation of each solution. Students will factor in the consequences of each solution and determine how close it comes to the desired result.
- Indicator 15:** *Apply problem-solving skills to original and creative or design projects.*
- ▶ Students will use the problem-solving process to create original and creative/design projects.

**Standard 4: ALL STUDENTS WILL DEMONSTRATE SELF-MANAGEMENT SKILLS.****Indicator 1:** *Set short and long term goals.*

- ▶ Students will identify and set short- and long-term goals and objectives based on personal and group needs.

Indicator 2: *Work cooperatively with others to accomplish a task.*

- ▶ Students will work cooperatively as part of a team; listen attentively; show appreciation for the contributions of others; compromise in areas of dispute; participate in completing tasks; accept responsibility for achieving goals; show mutual respect for diversity of ideas and people; and think constructively to allow the group to complete its tasks.

Indicator 3: *Evaluate their own actions and accomplishments.*

- ▶ Students will compare their accomplishments with what was expected; identify areas for improvement and/or the changes needed to reach a higher level of performance; and identify any long-term impact.

Indicator 4: *Describe constructive responses to criticism.*

- ▶ Students will describe ways to use feedback to improve performance and heighten effectiveness.

Indicator 5: *Provide constructive criticism to others.*

- ▶ Students will provide feedback in an effective and nonthreatening manner so that the recipient will feel empowered to be more effective during future tasks. Effective feedback needs to focus on behaviors, not personality traits; it must be descriptive, not judgmental, and specific and concrete, not general or abstract.

Indicator 6: *Describe actions that demonstrate respect for people of different races, ages, religions, ethnicity, and gender.*

- ▶ Students will explain actions that show respect for human dignity. These include internalizing the responsibility to protect and extend the worth and rights of all persons; avoiding deception and dishonesty; promoting human equality; respecting freedom of conscience; working with people who hold different views; refraining from prejudiced actions; and respecting public and private property.

- Indicator 7:** *Describe the roles people play in groups.*
- ▶ Students will explain the roles one might play in a group and how a person might play one role in “Group A” and a different role in “Group B.” Common roles that are identified according to their functions include timekeeper, facilitator, recorder, and summarizer. Roles are designed to ensure that members work together smoothly and effectively.
- Indicator 8:** *Demonstrate refusal skills.*
- ▶ Students will demonstrate the ability to say no or to refrain from participating in an activity or action with which they do not agree. The following are important elements of the communication process: I-messages, eye contact, speaking clearly, and the use of expressions and gestures that are genuine.
- Indicator 9:** *Use time efficiently and effectively.*
- ▶ Students will understand and apply time-management principles such as knowing how to use the time available and knowing how to solve problems encountered in using time wisely. Time-management tools include calendars, daily “to do” lists, tickler files, strategies to organize tasks, strategies for handling interruptions, and strategies to avoid procrastination. Managing time wisely includes setting aside time for leisure or recreational activities.
- Indicator 10:** *Apply study skills to expand their own knowledge and skills.*
- ▶ Students will build their own knowledge and skill base by applying study skills. This includes using techniques such as tackling the hardest parts of a task at the beginning; studying in a comfortable place free of distractions; gathering all materials before starting to study; studying when rested; reviewing what has been learned during the day; writing down key points when taking notes; using a variety of resources and techniques to accomplish tasks; and giving one’s full attention to the study time.
- Indicator 11:** *Describe how ability, effort, and achievement are interrelated.*
- ▶ Students will define ability, effort, and achievement and explain how each has an impact on the others. For example, abilities indicate skills and activities that one can perform successfully. Effort is related to the amount of time and thoroughness a person puts into a specific task. Achievements are goals that have been accomplished or tasks that were done well.

**Standard 5: ALL STUDENTS WILL APPLY SAFETY PRINCIPLES.****Indicator 1:** *Explain how common injuries can be prevented.*

- ▶ Students will explain how injuries may result from unsafe conditions, attitudes, and actions, and/or environmental conditions, and the ways in which injuries can be prevented.

Indicator 2: *Develop and evaluate an injury prevention program.*

- ▶ Students will create and evaluate an injury prevention program that focuses on safe practices, attitudes and actions, and /or environmental conditions.

Indicator 3: *Demonstrate principles of safe physical movement.*

- ▶ Students will employ safety principles and techniques when completing tasks.

Indicator 4: *Demonstrate safe use of tools and equipment.*

- ▶ Students will employ safety principles and techniques when using tools and equipment.

Indicator 5: *Identify and demonstrate the use of recommended safety and protective devices.*

- ▶ Students will select and employ appropriate safety and protective devices following employer, Occupational Safety and Health Act of 1970 (OSHA), and school safety and health standards and rules. Students will follow recommended procedures to report injuries and/or illness.

Indicator 6: *Identify common hazards and describe methods to correct them.*

- ▶ Students will recognize common hazards found in the home, in the community, and in the workplace. Students will also describe ways to provide a safe environment and control hazards.

Indicator 7: *Identify and follow safety procedures for laboratory and other hands-on experiences.*

- ▶ Students will employ safety procedures and techniques during experiential activities.

Indicator 8: *Discuss rules and laws designed to promote safety and health, and their rationale.*

- ▶ Students will identify the need for rules and laws to promote safety and health. Students will also discuss the costs associated with the rules and laws and the impact of disregarding them on self and on others.

Indicator 9: *Describe and demonstrate procedures for basic first aid and safety precautions.*

- ▶ Students will identify and demonstrate the first aid procedures needed to provide immediate, temporary treatment to a person before medical help arrives.
- ▶ Students will follow universal precautions and practices in first aid situations.



Appendix C

The Career Development Process

The career development process has been addressed by educators in much of the literature. This chapter reflects the thinking of multiple groups on the local, state and national levels. It is important to bear in mind that career development is a continuing process. Career development models are available at the national level. New Jersey piloted the National Career Development Guidelines (NCDG), which were adopted in 1989 by the National Occupational Information Coordinating Committee (NOICC). These guidelines represent the consensus of a collaborative group of state and professional associations, as well as national leaders, practitioners, and career development experts. The National Standards for School Counseling Programs, adopted in 1997 by the American School Counselor Association, promote and enhance student learning through academic development, career development, and personal/social development.

National Career Development Guidelines

In recent years, consensus around the provision of comprehensive and effective guidance and counseling for youth has coalesced around the National Career Development Guidelines. The guidelines emphasize three primary features of the career development program: content, process, and structure.

Content

According to the NCDG, the content of the career guidance and counseling program is defined by the state or local standards organized around three broad areas: self-knowledge, educational and occupational exploration, and career planning. To show the extent to which the cumulative progress indicators from the first New Jersey Cross-Content Workplace Readiness Standard align with national guidelines, the cumulative progress indicators are categorized by self-knowledge, educational and occupational exploration, and career planning categories in Table C.1. Keep in mind that the New Jersey cumulative progress indicators represent what students should know and be able to do by the time they complete high school.

Table C.1

NCDG CROSSWALK FOR STANDARD 1

NEW JERSEY CROSS-CONTENT WORKPLACE READINESS

STANDARD 1: All students will develop career planning and workplace readiness skills.

Self-Knowledge	1.1	Demonstrate employability skills and work habits, such as work ethic, dependability, promptness, and getting along with others.
	1.2	Describe the importance of personal skills and attitudes to job success.
	1.3	Identify career interests, abilities, and skills.
	1.11	Demonstrate skills and attitudes necessary for a successful job interview.
	1.12	Demonstrate consumer and other financial skills.
Educational and Occupational Exploration	1.5	Identify skills that are transferable from one occupation to another.
	1.7	Describe the importance of academic and occupational skills to achievement in the work world.
	1.8	Demonstrate occupational skills developed through structured learning experiences, such as volunteer, community service, and work-based experiences or part-time employment.
Career Planning	1.4	Develop an individual career plan.
	1.6	Select a career major and appropriate accompanying courses.
	1.9	Identify job openings.
	1.10	Prepare a resume and complete job applications.

Process

Various strategies are used to deliver the program content. Ideally, a range of people such as teachers, counselors, employers, and other community members are involved in the process and deliver these strategies at different points in a student's educational career, according to Nancy Perry in *How Do We Design a Comprehensive Career Guidance and Counseling Program?*, the National Career Development Guidelines include the following strategies or elements of a successful career development program:

- ▶ **Outreach** to students about the career guidance and counseling services available at the school.
- ▶ **Instruction** such as group activities and career related instruction that is integrated into academic instruction to help student acquire career development competencies.
- ▶ **Counseling** between individuals or small groups and a professional counselor to explore issues related to personal and career development.



- ▶ **Assessment** to help students gain an understanding of their individual skills, abilities, interests, achievements, and needs.
- ▶ **Career Information** resources such as computer-based career information, print materials, and videos to give students current and unbiased information.
- ▶ **Work Experience opportunities** for students in actual work settings.
- ▶ **Placement resources** are organized so that students are given the assistance they need to make successful transitions to work and/or postsecondary education.
- ▶ **Consultation** of career guidance specialists and counseling resources to provide information to staff, administrators, teachers, employers, parents, and others to expand the level of support that students are able to receive.
- ▶ **Referral** to encourage contact and cooperation with outside organizations to offer additional services needed by students.
- ▶ **Follow-up** that maintains long-term contact with students to determine the effectiveness of career-related decisions.

Structure

The National Career Development Guidelines recommend the following elements of a strong organizational structure to enable the successful delivery of the program processes listed above:

- ▶ **Leadership** support for the counselor and career development specialists.
- ▶ **Management** support to organize program planning, clarify staff roles and responsibilities, secure resources, and monitor program delivery.
- ▶ **Personnel** such as other staff and community resource persons to help link students and schools with other organizations.
- ▶ **Facilities** including adequate space, materials, and equipment to deliver quality career guidance and counseling.
- ▶ **Resources** to purchase materials, equipment, and other items.

The National Career Development Guidelines provided a strong foundation for New Jersey's Cross-Content Workplace Readiness standards and indicators. For comparison, Table C.2, a chart of the NCDG by area and level, follows. Note that the National Career Development Guidelines competencies were organized by educational level: elementary, middle/junior high school, high school, and adult.

Table C.2

NCDG COMPETENCIES BY AREA AND LEVEL

	Elementary	Middle/Junior High School	High School	Adult
Self-Knowledge	<p>Knowledge of the importance of self-concept</p> <p>Skills to interact with others</p> <p>Awareness of the importance of growth and change</p>	<p>Knowledge of the influence of a positive self-concept</p> <p>Skills to interact with others</p> <p>Knowledge of the importance of growth and change</p>	<p>Understanding the influence of a positive self-concept</p> <p>Skills to interact positively with others</p> <p>Understanding the impact of growth and development</p>	<p>Skills to maintain a positive self-concept</p> <p>Skills to maintain effective behaviors</p> <p>Understanding developmental changes and transitions</p>
Educational and Occupational Exploration	<p>Awareness of the benefits of educational achievement</p> <p>Awareness of the relationship between work and learning</p> <p>Skills to understand and use career information</p> <p>Awareness of the importance of personal responsibility and good work habits</p>	<p>Knowledge of the benefits of educational achievement to career opportunities</p> <p>Understanding the relationship between work and learning</p> <p>Skills to locate, understand, and use career information</p> <p>Knowledge of skills necessary to seek and obtain jobs</p>	<p>Understanding the relationship between educational achievement and career planning</p> <p>Understanding the need for positive attitudes toward work and learning</p> <p>Skills to locate, evaluate, and interpret career information</p> <p>Skills to prepare, to seek, obtain, maintain, and change jobs</p>	<p>Skills to enter and participate in education and training</p> <p>Skills to participate in work and life-long learning</p> <p>Skills to locate, evaluate, and interpret career information</p> <p>Skills to prepare, to seek, obtain, maintain, and change jobs</p>



Table C.2

NCDG COMPETENCIES BY AREA AND LEVEL

	Elementary	Middle/Junior High School	High School	Adult
Educational and Occupational Exploration	Awareness of how work relates to the needs and functions of society	Understanding how work relates to the needs and functions of the economy and society	Understanding how societal needs and functions influence the nature and structure of work	Understanding how the needs and functions of society influence the nature and structure of work
Career Planning	<p>Understanding how to make decisions</p> <p>Awareness of the interrelationship of life roles</p> <p>Awareness of different occupations and changing male/female roles</p> <p>Awareness of the career planning process</p>	<p>Skills to make decisions</p> <p>Knowledge of the interrelationship of life roles</p> <p>Understanding the continuous changes in male/female roles</p> <p>Understanding the process of career planning</p>	<p>Skills to make decisions</p> <p>Understanding the interrelationship of life roles</p> <p>Understanding the continuous changes in male/female roles</p> <p>Skills in career planning</p>	<p>Skills to make decisions</p> <p>Understanding the impact of work on individual family life</p> <p>Understanding the continuing changes in male/female roles</p> <p>Skills to make career transitions</p>

Source: <http://www.noicc.gov/files/ncompet.html> (November 11, 1999).

National Standards for School Counseling Programs

The American School Counselor Association has also adopted standards, which are included Table C.3. The association's National Standards for School Counseling Programs address and support aspects of the CCWR (e.g., safety and self-management).

Table C.3

ASCA NATIONAL STANDARDS

AMERICAN SCHOOL COUNSELOR ASSOCIATION NATIONAL STANDARDS FOR SCHOOL COUNSELING PROGRAMS

OVERVIEW

The purpose of a counseling program in a school setting is to promote and enhance the learning process. To that end, the School Counseling Program facilitates Student Development in three broad areas: Academic Development, Career Development, and Personal/Social Development. The following chart describes the standards for each area.

Chapter 4 Academic Development

- Standard A:** Students will acquire the attitudes, knowledge, and skills that contribute to effective learning in school and across the life span.
- Standard B:** Students will complete school with the academic preparation essential to choose from a wide range of substantial postsecondary options, including college.
- Standard C:** Students will understand the relationship of academics to the world of work, and to life at home and in the community.

Chapter 4 Career Development

- Standard A:** Students will acquire the skills to investigate the world of work in relation to knowledge of self and to make informed career decisions.
- Standard B:** Students will employ strategies to achieve future career success and satisfaction.
- Standard C:** Students will understand the relationship between personal qualities, education and training, and the world of work.

Chapter 4 Personal/Social Development

- Standard A:** Students will acquire the attitudes, knowledge, and interpersonal skills to help them understand and respect self and others.
- Standard B:** Students will make decisions, set goals, and take necessary action to achieve goals.
- Standard C:** Students will understand safety and survival skills.

Source: Chari Campbell and Carol A. Dahir, *Sharing The Vision: The National Standards for School Counseling Programs*, 1997.



Appendix D

Academic Area Framework Crosswalks to Cross-Content Workplace Readiness Standards

To help prepare students for a rapidly changing world, the New Jersey State Board of Education adopted five Cross-Content Workplace Readiness Standards to be integrated within the seven academic content areas. These standards define the skills students need as they pursue higher education, careers, and responsibilities as adult citizens. Educators are charged to integrate these concepts into all programs in content-specific and developmentally appropriate ways.

In order to bring the standards and indicators to life in the context of the classroom, frameworks were developed in each of the seven content areas. These frameworks are a resource for local educators as they develop district curriculum and instructional plans. The framework provides activities and vignettes as well as the educational rationale for them.

To strengthen the linkages between each content area and the Cross-Content Workplace Readiness Standards, framework activities and scenarios have been designed to include interdisciplinary approaches to workplace readiness. The interdisciplinary approach combines several content disciplines and workplace readiness in a common activity that helps students recognize the relationships that exist between the disciplines. In addition, the use of a systems approach allows educators to develop an overview perspective. The result is a highly motivating and engaging framework for learning.

The following sample activities *were taken directly from the academic content area frameworks*. They illustrate the infusion of Cross-Content Workplace Readiness standards and indicators *as they appear in those frameworks*.

Visual and Performing Arts

Standard 1.6

Visual Arts: All students will develop design skills for planning the form and function of space, structures, objects, sound, and events.

Cumulative Progress Indicator 2: Plan and execute solutions to design problems.

Grade Levels: K to 4

Activity: *Box Cars*

Students will design a vehicle. Consider the varied uses of vehicles, such as automobiles, boats (all kinds), buses, planes, trains, trucks, futuristic vehicles, etc. They also discuss bumper cars, all-terrain vehicles, rafts, hot air balloons, etc. Bring in model or toy vehicles to display. Students learn that “Form follows function” so they must decide:

- What will their vehicle be used for?
- Who and how many will use it? How old are they?
- What does the vehicle need?
- What will make it safe? (Develop through discussion.)
- How will the exterior be designed?

Students select from a variety of boxes, such as shoe boxes, cereal boxes, egg cartons, and appliance cartons (for group project). They also select from various media.

Workplace Readiness Skills: 3.1/3.8/3.12/3.15/5.1/5.6/5.7/5.8



Comprehensive Health and Physical Education

Standard 2.3: All students will learn the physical, mental, emotional, and social effects of the use and abuse of alcohol, tobacco, and other drugs.

Indicator 2.3-15: Analyze the short and long-term effects of chemical use, abuse, and dependency on the body, behavior, work and school performance, and personal relationships

Grade Levels: 9-12

Teacher Tip: For the next activity use local companies that employ students (e.g., in cooperative employment experiences, internships, mentorship programs).

Activity H: *On the Job*

Students interview individuals employed in various occupations to determine how alcohol, tobacco, and other drugs might interfere with job performance. Find out if the individuals are aware of employee assistance programs or benefits from their health insurance companies that support treatment for chemical dependency.

Variation: Invite former students to discuss issues and problems associated with substance use in college, on the job, or the military.

Variation: Divide the class into small groups. Each group selects a different type of business (e.g., construction, computers, healthcare) and develops substance abuse policies for the company. Groups share their ideas and discuss them with a human resources director from a local company.

Workplace Readiness Skills: 1.2/1.3/1.11/5.1

Language Arts Literacy

Standard 3.4: All students will read a variety of materials and texts with comprehension and critical analysis.

Cumulative Progress Indicator 21: Analyze text using patterns of organization, such as cause and effect, comparison and contrast.

Grade Level: Middle School

Activity: Students examine various text types that demonstrate patterns of cause/effect, comparison/contrast, persuasive/argumentative, etc. Then, using an overhead projector, the teacher shows partially completed graphic organizers that match the text types examined and asks the students to complete the organizers. Next, students examine unfamiliar texts and construct the ideas in an organizer of their own choice. After completing the organizer, they write a narrative explaining the process they used for this activity.

Workplace Readiness Skills: 3.7/3.8



Mathematics

The First Four Standards—Grades K-2

Vignette—Will a Dinosaur Fit?

Standards: In addition to the First Four Standards, this vignette highlights Standards 6 (Number Sense), 7 (Geometry), 9 (Measurement), and 11 (Estimation).

The problem: The second grade was in the midst of a unit on dinosaurs when the teacher read to her class the book *Danny and the Dinosaur* by Syd Hoff (Harper & Row, 1958). After the first reading, the children re-examined some of the illustrations. One picture depicted the dinosaur larger than a block of homes, another showed the dinosaur almost completely hidden by one house. One picture showed the dinosaur taller than an apartment building and yet another showed the dinosaur not quite as tall as a lamp post. Students were intrigued by the idea that Danny’s dinosaur friend did not seem to be of a consistent size. They voiced opinions about the dinosaur’s actual size. Since students seemed to have a sustained interest in exploring the sizes of dinosaurs, the teacher presented students with this question: *Do you think that a dinosaur could fit into our classroom?*

The discussion: Brainstorming was encouraged by the teacher as questions such as the following were posed by students and by the teacher. *What does it mean to “fit” in the classroom? What information would we need to get in order to determine if a dinosaur could fit in our classroom? Do you think all of our answers will be the same? Why? What do we know already that might help us? What materials do you think we would need?*

Solving the problem: Students worked in groups of 3 over a period of several days. They began by choosing a specific dinosaur and then they used a variety of books and computer software in the classroom to find the size of their dinosaur. They determined the size of the classroom, choosing to measure with a trundle wheel or a tape, or by using estimation. Then they decided, by comparing the measures found in books with those made of the classroom, whether the dinosaur would fit into the classroom. Each group was responsible for creating a display and making a presentation to the class to answer the question. The displays made use of models, pictures, and text. Students with more than a few sentences to write were encouraged to make use of the word processor available in the classroom.

Summary: Students used their displays to make presentations to the class. There were a variety of answers. Those who had chosen one of the smaller dinosaurs, the velociraptors, for example, found that the dinosaur could walk through the doorway and several dinosaurs would fit in the room. Others, who had chosen larger dinosaurs, the stegosaurus, for example, found that if the dinosaur could have gotten through the doorway, several would have fit in the room. Still others, who had chosen very large dinosaurs, the brachiosaurus, for example, found that the dinosaur would not have fit into the room at all. As the presentations ended, several children suggested further explorations that might be interesting: *Would the dinosaur I chose fit into the multipurpose room? Was the dinosaur I chose as long as the driveway in front of the school? Was the dinosaur I chose taller than the school building?*

Workplace Readiness Skills: 3.1/3.2/3.3/3.4/3.5/4.2

Science

Standard 9: All students will gain an understanding of natural laws as they apply to motion, forces, and energy transformations.

Indicator 13: Explain that the sun is a major source of the earth's energy and that energy is emitted in various forms, including visible light, infrared, and ultraviolet radiation.

Grade Levels: 7–8

Learning Activity: *Energy Conservation*

Students brainstorm ideas for reducing their dependence on nonrenewable energy sources (e.g., use less, conserve, or change to a renewable source). Selecting from the best brainstorming ideas, students will engage in technology by designing and making/modeling items for an improved energy utilization in their school, home, or community.

For example they can

- Design solar heaters or ovens
- Reduce air infiltration
- Plan for carpooling
- Suggest a sweater/sweatshirt day and lower building temperatures
- Develop a system to reduce unnecessary lighting
- Design a new line of clothing
- Develop a system that automatically turns off lighting in unoccupied rooms

Workplace Readiness Skills: 2.1/2.9/3.15



Social Studies

Standard 6.5.: All students will acquire historical understanding of varying cultures throughout the history of New Jersey, the United States and the world.

Indicator 18: Evaluate the mutual influence of technology and culture.

Science and technology have a profound effect on the attitudes, values and “world views” of cultural groups. Conversely, cultural groups define the uses of science and new technologies. This indicator asks students to explore the dynamic between science and culture.

Grade Levels: 9–12

The Cultural Impact of Scientific Revolutions

Historical Period(s): The Age of Global Encounters (to 1700)

The Age of Revolutions (to 1850)

The Age of Imperialism and World War (to 1950)

The Modern World

Historical Theme: The History of Social Thought

Overview

Science and technology have a major impact on culture, as can be seen by studying the progression of scientific thought from Galileo to Isaac Newton to Albert Einstein. Coupled with the ideas of “paradigm shift” (Thomas Kuhn) and the problem of the gap between the scientific and popular cultures (C.P. Snow), such study will introduce students to how science and technology have changed the culture in which we live.

Cosmologies. Provide students with selected readings on the general world-view at the time of Copernicus. Why did people in general believe the earth was the center of the universe? How was this belief related to religious convictions? If the earth is not the center of things, what does this say about man and his place in the universe? If man is not the center, then what is his/her appropriate place in the cosmos? Students can begin to develop explanations of why European cultures were slow to replace the geocentric theory with the heliocentric theory in response to the findings of Galileo in the 16th century.

Literary version. Students read literary versions of the story of Galileo, especially the play by Bertolt Brecht. What are the issues of conscience in this play? When should religious conviction over-rule scientific discovery? These are difficult and complex issues for students to consider. The teacher should be sensitive to religious convictions of students in any such consideration. Teach the conflicts but pro-

vide students with a model of the ability to consider alternate viewpoints and explanations for complex phenomena.

Newton and Einstein. Our world view is based in most cases on what science has discovered about space, time, matter, energy and other matters of import. This world view also effects our everyday lives and thoughts and beliefs about many things. Teachers can explain how the work of Issac Newton in the 17th century and Albert Einstein's work in the 20th century laid the groundwork for such significant developments as atomic energy and television, and the impact of these developments on culture. Ask students to use the encyclopedia in the school library or to consult HYPERLINK <http://www.encyclopedia.com> to study the life and times of both Newton and Einstein.

- How did their discoveries change the world view at the time?
- What did the laws of gravity mean to the people of Newton's time, the 17th century?
- Did people begin to develop a more mechanistic view of the universe?
- How did Einstein's discoveries affect the thinking and cultures of the 20th century?

Metatheories. Students are ready now to begin to consider the impact of science on culture in a broader context. Provide reading selections from Kuhn's *The Structure of Scientific Revolutions* and Snow's *The Two Cultures*. Have students do book reviews on their reading, to be presented to the class for general discussion and critique.

The following are basic understandings for students while studying the impact of science and technology on civilizations:

- Change is a basic mechanism for the growth of civilizations.
- Such change comes from either science or art.
- There can be great resistance to change if basic views and assumptions are challenged.
- People who educate the community to accept salutary changes are frequently rejected in their own time and honored later.
- Some proposed changes are good; some are not.
- It is our individual responsibility to be able to determine the difference. This is a major role for education in everyone's life.

Students begin to list and discuss changes that have happened in their lifetimes. Each student selects a good change and does some research to be able to describe the change and its effects on the culture.

Further Exploration

There are a number of possibilities for extension of this unit. Students can illustrate heliocentric and geocentric theories in a pair of three-dimensional displays; they can survey the number of hours students watch television and relate the findings to Einstein's work on photoelectricity; and they can prepare a chart showing all of the ways that knowledge of atoms and their structures affects daily life.

**Connections**

The above activities allow students to compare customs of societies over time (Standard 6.4, Indicator 6) and to analyze how cultural and scientific institutions function either to maintain continuity or to promote change.

Resources

Kuhn, Thomas S. *The Structure of Scientific Revolutions*. Revised Edition. Chicago: University of Chicago Press, 1970.

Jacob, Margaret C. *The Cultural Meaning of the Scientific Revolution*. Philadelphia: Temple University Press, 1988.

Snow, C.P. *Two Cultures: and a Second Look. Second Edition*. New York: New American Library, 1964.

Laughton, Chas. (translator) *Galileo* by Bertolt Brecht. New York: Grove Press, 1991.

Workplace Readiness Skills: 2.10/3.3/3.4/3.5/3.8/3.9

World Languages

Standard 7.1: All students will be able to communicate at a basic literacy level in at least one language other than English.

Standard 7.2: All students will be able to demonstrate an understanding of the interrelationship between language and culture for at least one world language in addition to English.

Cumulative Progress Indicators:

- 7.1.1 Respond to and initiate simple statements and commands such as greetings, introductions, and leave-takings.
- 7.1.4 Describe people places things and events using short phrases and simple sentences.
- 7.1.5 Provide and obtain information on familiar topics.
- 7.2.1 Demonstrate an awareness of culture.
- 7.2.2 Demonstrate knowledge of the cultures of speakers of the language studied.

Grade Levels: K to 2

Activity: *Come Home With Me*

Activity Overview: By constructing model homes that are found in the target culture, students learn about a tangible cultural product through a hands-on classroom experience. Language is used in a meaningful way as students discover the similarities and differences between their own homes and dwellings in the target culture.

Resources and Materials: Clay, play dough, building blocks, construction paper, craft sticks, poster board, brown manila paper, tissue and crepe paper, recycled materials in a variety of shapes and sizes, and library media center.

**Assessment:**

- Formative: Monitor students' use of the target language during classroom activities with a checklist rubric.
- Summative: Evaluate students' drawings for clarity and completeness. Evaluate oral presentations for comprehensibility and accuracy using an oral language rating scale. Tape students' model-home presentations, and include audio-cassettes in students' portfolios with their drawings.

Steps for Planning and Implementation:

1. With assistance from the library media specialist, students use available resources to locate pictures of typical target-culture dwellings.
2. Enlarge the pictures and display them around the room. Place pictures of houses and apartment buildings found in the students' communities next to the pictures of the target-culture dwellings.
3. Introduce vocabulary about dwellings using a variety of techniques, including puppets.
4. Students work on paired activities designed to review weather expressions and vocabulary about the environment that influence the type of home typically built in the target culture.
5. Elicit responses from students about the similarities and differences between target-culture dwellings and dwellings in their own community. Graph the responses on a T-chart.
6. Read a story in the target language on the theme of homes.
7. Students draw a picture of the outsides of their houses (or apartments), or bring in a photo of their homes.
8. Students make simple oral presentations to the class about their houses/apartments. Record the presentations on audiocassettes. Display the drawing(s) or photo(s) on a bulletin board with a label indicating whose dwellings they are.
9. Along with the art specialist, help the students make a model of dwellings in the target culture. Encourage students to use the target language during this phase of the activity by walking around the room and asking students simple questions about their projects.
10. Invite parents to visit when the students present their model homes to the class. Students prepare simple foods from the target culture, which they serve to guests and friends.
11. Display the students' models of homes in the school and in appropriate community sites.

Extension Activities:

- Using guided questions, students write paragraphs to accompany their model dwellings.
- Students sing songs and/or play games from the target culture on the theme of homes.
- Students create a model of a town in the target culture.

Interdisciplinary Connections:

- **Visual and Performing Arts:** 1.5.3: Apply knowledge of historical, social, and cultural influences to understanding a work of art. 1.6.2: Plan and execute solutions to design problems.
- **Language Arts:** 3.1.1: Use listening, writing, reading, and viewing to assist with speaking. 3.2.1: Use speaking, writing, reading, and viewing to assist with listening.
- **Science:** 5.10.4: Collect and record weather data to identify existing weather conditions, and recognize how those conditions affect our daily lives.
- **Social Studies:** 6.8.2: Discuss the similarities, differences, and interdependencies among rural, suburban, and urban communities. 6.8.5: Compare the physical characteristics of places and regions.
- **Library Information Skills:** Locate, select, retrieve, and assess a variety of print, CD-ROM, and online materials.

Workplace Readiness Skills: 2.6/2.8/3.4/3.5/3.15/4.2



Appendix E

Glossary

Academy model — Operating as schools-within-schools, academies provide the following three unique components: (1) *block rostering*, which allows each entering class of students to take core subjects together with the same teachers; (2) *long-term relationship* with the core teachers, who teach the required core subjects for all academy students every year; and (3) formal business ties which provide the real-world basis for the occupational focus of the academy as well as sources of mentors, internship experiences and potential postsecondary employment opportunities (*National Center for Research in Vocational Education [NCVRVE]*, MDS-768).

All aspects of the industry — Exposure to each of the components of the industry or industry sector a student is preparing to enter, including planning, management, finances, technical and production skills, underlying principles of technology, labor and community issues and health, safety and environmental issues related to such industry or industry sector (P.L. 103-239, *The School-to-Work Opportunities Act of 1994*, Section 4, and *School-to-Work Opportunities: Glossary of Terms*, June 1995).

Apprentice — A worker who is at least 16 years of age, except where a higher minimum age standard is otherwise fixed by law, who is employed to learn a skilled trade under standards of apprenticeship fulfilling the requirements of the *United States Department of Labor, Labor Standards for the Registration of Apprenticeship Programs* (Title 29 CFR Part 29) and the *Equal Employment Opportunity in Apprenticeship and Training Act* (Title 29 CFR Part 30).

Apprenticeship program — A plan containing all terms and conditions for the qualification, recruitment, selection, employment and training of apprentices, including such matters as the requirement for a written apprenticeship agreement in conformance with the *United States Department of Labor, Labor Standards for the Registration of Apprenticeship Programs*, (Title 29 CFR Part 29) and the *Equal Employment Opportunity in Apprenticeship and Training Act* (Title 29 CFR Part 30).

Block scheduling — A means of circumventing the time constraints of a single class period. The traditional school day is typically divided into six or seven classes that each last from forty-five to fifty-five minutes. With few exceptions, classroom instruction begins and ends within the allotted time period. Blocked courses may be scheduled for two or more continuous class periods or days to allow students greater time for laboratory or project-centered work, field trips or work-based learning and special assemblies or speakers. Moreover, block scheduling reduces the instruction time lost in passing between classes (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

Business/industry relationships — Connections between educational entities and local business/industry organizations for the purpose of meeting the needs of the students and employers as customers of the educational process.

Career academy — A school-within-a-school in which a team of teachers offers a career related academic curriculum to students in grades 10-12 or sometimes grades 9-12 (*School-to-Work Transition: Resources for Counseling*).

Career awareness and exploration — Instruction and programs that assist students to clarify career goals, explore career possibilities, develop employability skills, and make the transition from school to work and/or postsecondary education.

Career guidance and counseling — Programs that

- ▶ pertain to the body of subject matter and related techniques and methods organized for the development in individuals of career awareness, career planning, career decision making, placement skills and knowledge and understanding of local, state and national occupational, education and labor market needs, trends and opportunities;
- ▶ assist individuals in making and implementing informed educational and occupational choices;
- ▶ aid students in developing career options with attention to surmounting gender, race, ethnic, disability, language or socioeconomic impediments to career options and encouraging careers in nontraditional employment (P.L. 103-239, *The School-to-Work Opportunities Act of 1994*, Section 4, and *School-to-Work Opportunities: Glossary of Terms*, June 1995).

Career development — A comprehensive, competency-based developmental program designed to assist students in making and implementing informed educational and occupational choices. The competencies, identified in the National Career Development Guidelines, focus on the areas of self-knowledge, education, occupational exploration, and career planning. Programs include competency-based activities and services that emphasize knowledge, skills, and abilities that enable the learner to

- ▶ identify various aspects of occupational careers;
- ▶ use critical-thinking skills to make meaningful occupational choices;
- ▶ qualify for entry to occupational education programs.

The basic skills and abilities the individual should master in order to deal successfully with daily life and career development tasks in a technological society are introduced and developed. This includes, but is not limited to, problem solving, decision making, balancing work and life, evaluation of one's uniqueness, and acquiring basic knowledge of different occupations.



Career pathway/career interest areas — The New Jersey Department of Education, through code has designated four career interest areas for students to explore as part of career development activities from K-12. The four career interest areas are (1) arts and humanities; (2) business and information; (3) mathematics, science and technology, and health and human services.

Career portfolio — A carefully selected collection of information that demonstrates a student's talents, interests, abilities, achievements and experiences. It documents the development of education/career goals and one's successful transition from school-to-work (*School-to-Work Transition: Resources for Counseling*).

Career preparation — Involves high school students in selecting a career major for study. During this time, the student is acquiring the academic and occupational skills and knowledge for entry-level employment and/or admission to postsecondary training. The acquiring of skills occurs in contextual and applied-learning settings. Through the process, a skills certificate must be developed for each student indicating the general workplace and/or specific occupational skills to be achieved. Support services are provided for those who need them. The student continues to evaluate the career plan and is allowed to make the necessary changes based on individual needs.

Community-based organizations (CBOs) — Private nonprofit organizations which are representative of communities or significant segments of communities and which provide job-training services. Include organizations serving nonreservation Indians as well as tribal governments and Native Alaskan groups (*Job Training Partnership Act*, [JTPA], Section 4, 29 U.S.C. 1503 [5]).

Contextual learning — Instruction that imparts knowledge within the context in which it will later be used. Linking abstract concepts with real-life problems, contextual learning enables students to personally test and prove academic theories via tangible, real-world applications. Stressing the development of authentic problem-solving skills, contextual learning is designed to blend the teaching of skills and knowledge in a specific industry or occupational area (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

Design — An iterative decision-making process that produces plans by which resources are converted into products or systems that meet human needs and wants or solve problems. (*Standards for Technological Literacy*, ITEA).

Integrated curriculum — In integrated curriculum, academic and occupational or career subject matter—normally offered in separate courses—are taught in a manner that emphasizes relationships among the disciplines. Integrated curriculum may take many forms, ranging from the simple introduction of academics into traditional occupational courses to comprehensive programs that organize all instruction around career themes (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

Job shadowing — As part of career exploration activities, a student follows an employee for one or more days to learn about a particular occupation or industry. Job shadowing is intended to help students hone their career objectives and select a career major for the latter part of high school (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

Mentoring — Pairing a student with an individual over an extended period of time during which the individual helps the student master certain skills and knowledge the individual possesses, models workplace behavior, challenges the student to perform well and assesses the student's performance. Mentoring may be combined with other work-based learning activities, such as internships or on-the-job training (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

National Career Development Guidelines — An initiative, sponsored by the National Occupational Information Coordinating Committee (NOICC), intended to establish national guidelines that state and local organizations can use to strengthen and improve career guidance and counseling programs and enhance individual competence.

Project-based learning — A method of instruction that offers learners totally integrated work and learning experiences developed around the completion of finite projects that produce tangible results. SCANS skills, academic content, and knowledge permeate the projects. Learners use research, critical thinking, and problem-solving skills to implement the projects. Supervisors and teachers shift away from telling learners what to do and let learners take on the role of overseer.

Rubric — A rubric is a scoring guide that describes criteria for student performance and differentiates among different levels of performance within those criteria.

SCANS — The Secretary's Commission on Achieving Necessary Skills (SCANS) was convened in February 1990 to examine the demands of the workplace and to determine whether the current and future workforce is capable of meeting those demands. The commission was directed to (1) define the skills needed for employment; (2) propose acceptable levels in those skills; (3) suggest effective ways to assess proficiency; and (4) develop a strategy to disseminate the findings to the nation's schools, businesses, and homes.

Based on its research, the commission identified five competencies — skills necessary for workplace success, and three foundation skills and qualities that underlie competencies.

Competencies: effective workers can productively use

- ▶ Resources — allocating time, money, materials, space and staff;
- ▶ Interpersonal Skills — working on teams, teaching others, serving customers, leading, negotiating and working well with people from culturally diverse backgrounds;



- ▶ Information — acquiring and evaluating data, organizing and maintaining files, interpreting and communicating and using computers to process information;
- ▶ Systems — understanding social, organizational and technological systems, monitoring and correcting performance and designing or improving systems;
- ▶ Technology — selecting equipment and tools, applying technology to specific tasks and maintaining and troubleshooting technologies.

Foundations: competence requires

- ▶ Basic Skills — reading, writing, arithmetic and mathematics, speaking and listening;
- ▶ Thinking Skills — thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn and reasoning;
- ▶ Personal Qualities — individual responsibility, self-esteem, sociability, self-management, and integrity (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

School-sponsored enterprise — The production of goods or services by students for sale to or use by others. School-sponsored enterprises typically involve students in the management of the project. Enterprises may be undertaken on or off the school site (*School-to-Work Opportunities: Glossary of Terms*, June 1995).

System — A system is a group of interacting, interrelated, or interdependent elements that together form a complex whole. All the parts of the system are related to the same overall process, procedure, or structure, yet they are (most likely) all different from one another and often perform completely different functions (Kauffman 1980).

Service learning — A method in which youth develop through active participation in organized service that is conducted in and meets the needs of a community; that is coordinated with a community-service program; that helps foster civic responsibility; that is integrated into and enhances the educational components of the community-service program in which the participants are enrolled; and that provides structured time for the participants to reflect on the service experiences.

Structured learning experience — Supervised student cocurricular or extracurricular activities, school-based enterprises, volunteer or paid employment, apprenticeship programs, or community service within disciplines linked to the Core Curriculum Content Standards.

Systems thinking — Systems thinking is a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behavior of systems. This approach allows participants to change systems more effectively and to act in tune with the larger processes of the natural and economic world. Systems thinking articulates the interrelationships between the complex elements of real-life situations as they evolve over time (Kauffman 1980).

Volunteerism — Volunteerism is the service performed by people of their own free will, sometimes without the benefit of a program to coordinate the efforts. It means a person who donates his or her service for the projection of the health and safety of the general public. Such a person would include, among others, a volunteer fireman, rescue worker, an aide in the care of the sick, aged, young, mentally ill, destitute and the like or assistant in religious, charitable, educational, hospital, cultural and similar activities (N.J.A.C. 12:56-2.1).



Appendix G

Resources

The following resources are provided by the National Center for Research in Vocational Education (NCRVE).

CAREER DEVELOPMENT ORGANIZATIONS

American School Counselor Association
National Career Development Association

www.schoolcounselor.org
www.ncda.org

NATIONAL RESOURCES FOR TEACHERS

American Federation of Teachers
American Vocational Association
Association for Supervision and Curriculum Development
Center for Occupational Research and Development (CORD)
Center for Research on Evaluation, Standards, and Student Testing (CRESST)
Council of Chief State School Officers
Education Week
Eisenhower National Clearinghouse for Mathematics and Science Education
Institute for Educational Leadership
International Society for Technology in Education (ISTE)
Learning First Alliance
National Education Association
National Education Goals Panel
National Governors Association/Center for Best Practices
National PTA (Parent Involvement Standards)
National Skill Standards Board
New Standards Project, National Center on Education and the Economy
Teacher Magazine

www.aft.org
www.avaonline.org
www.ascd.org
www.cord.org
www.cse.ucla.edu
www.ccsso.org
www.edweek.org
www.enc.org
www.iel.org
www.iste.org
www.learningfirst.org
www.nea.org
www.negp.gov
www.nga.org/CBP
www.pta.org
www.nssb.org
www.ncee.org
www.teachermagazine.org

SUBJECT MATTER ORGANIZATIONS

Center for Civic Education	www.civiced.org
International Reading Association	www.reading.org
National Communication Association	www.natcom.org
National Academy of Sciences, National Research Council (NAS)	www.nas.edu/nrc
National Council for the Social Studies (NCSS)	www.ncss.org
National Council of Teachers of English (NCTE)	www.ncte.org
National Council of Teachers of Mathematics (NCTM)	www.nctm.org

FEDERAL INFORMATION

<i>U.S. Department of Education</i>	www.ed.gov
Office of Adult and Vocational Education	www.ed.gov/offices/OVAE
Goals 2000	www.ed.gov/G2K
Academic and Skill Standards	www.ed.gov/G2K/standard.html
<i>U.S. Department of Labor</i>	www.dol.gov
Employment and Training Administration	www.doleta.gov
<i>National School-to-Work Office</i>	http://www.stw.ed.gov

VOCATIONAL STUDENT ORGANIZATIONS

DECA (Marketing Education)	www.deca.org
FCCLA (Family and Consumer Sciences)	www.fhahero.org
Future Business Leaders of America-Phi Beta Lambda (FBLA-PBL)	www.fbla-pbl.org
Health Occupations Students of America (HOSA)	www.hosa.org
National FFA (Agriculture)	www.ffa.org
Technology Student Association (TSA)	www.tsawww.org
Vocational Industrial Clubs of America (VICA)	www.vica.org



Districts may find the following web sites useful in obtaining information and services. Sources are provided by the Center on Education and Training for Employment, the Cumberland County School-to-Career Initiative, the Millville Public Schools, Department of Education searches, National Career Guidance News, resources from the School-to-Work Opportunities Act, and others. The New Jersey Department of Education does not recommend or endorse any materials. Web site addresses frequently change and searching titles may result in different address.

Standard 1: All Students will develop career planning and workplace readiness skills.

Interest and Ability Assessments

The Career Key	http://www.ncsu.edu/careerkey/index.html
Birkman Method Career Style Summary	http://www.review.com/birkman/
The Interest-Finder Quiz	http://www.myfuture.com/secondary/career/ch_interestquiz.html
The Career Questionnaire	http://www.collegeboard.org/career/html/searchQues.html
Interest Finder Quiz	http://www.schoolfinder.com/career/carquiz.htm
Traditional IQ Tests on the WWW	http://www.2h.com/Tests/iqtrad.html

Personality Assessments

The Keirsey Temperament Sorter	http://keirsey.com/
Myers-Briggs Personality Types and Careers	http://www.cs.monash.edu.au/~damian/Personality/
Personality I.D.	http://www.cfcministry.org/personalityID/index.htm
The Kingdomality Personal Preference Profile	http://www.cmi-lmi.com/kingdomality.html
Behavioral Style Survey	http://www.platinumrule.com/surveyi.html
A Quick Personality Test	http://www.users.interport.net/~zang/personality.html

Occupational Exploration

The Occupational Outlook Handbook	http://stats.bls.gov/ocohome.htm
The Occupational Outlook Quarterly Online	http://stats.bls.gov/opub/ooq/ooqhome.htm
Bureau of Labor Statistics Home Page	http://state.bls.gov/
Teacher's Guide to the Bureau of Labor Statistics Career Information	http://stats/bis.gov/k12/html/edu_tch.htm
America's Career InfoNet	http://www.acinet.org/acinet/
What Can I Do with a Major In...?	http://www.uncwil.edu/stuaff/career/majords.htm
On-Line Mission Statement Builder	http://www.franklincovey.com/customer/missionform.html
Practical Experience	http://bgsu.edu/offices/careers/process/step3.html
Oklahoma Department of Vocational and Technical Education Curriculum and Instructional Materials Center	www.okvotech.org/cimc
Cornell Youth and Work Program, (focus on work-based learning)	http://www.human.cornell.edu/youthwork/

Connecticut Business and Industry Association	http://www.cbia.com/edtraining/STC/Video%20pages/default.htm
	http://webdesign/educate/school_to...ch_ch jobs/Health andBio/hlthbio.htm
	http://webdesign/educate/school_to...logist/laboratory_technologist.htm
	http://webdesign/educate/school_to...Specialist/support_specialist.htm
	http://webdesign/educate/school_to...Animal_Technician/lab_an_tech.htm
	http://webdesign/educate/school_to...ech_jobs/Environmental/enviro.htm
	http://webdesign/educate/school_to...ield_Technician/env_field.tech.htm
	http://webdesign/educate/school_to...chnician/instrument_technician.htm
	http://webdesign/educate/school_to...l/Reg_Comp_Tech/regu_comp_tech.htm
	http://webdesign/educate/school_to...Ag_Hort_Technician/agriculture.htm
	http://webdesign/educate/school_to...m-tech_jobs/Technologies/tech2.htm

Developing Career Plans

College Focus	http://careers.crosswalk.com/cf/
C3	http://www.c3apply.org/index.html
Yahoo's College Search	http://features.yahoo.com/college/search.html
Peterson's College Quest	http://216.33.117.163/plugin.nd/CollegeQuest/pgGateway
CollegeNet	http://www.collegenet.com/
College Edge Career Search	http://CollegeEdge.com/cm/car/search/
Career Mosaic	http://www.careermosaic.com/
Kaplan	http://www1.kaplan.com/
Career Magazine	http://www.careermag.com/
Think College Early	http://www.ed.gov/think/college

Career Awareness and Exploration

The Career Interest Game	www.missouri.edu/~cppcwww/holland.shtml
CHOICES	http://www.choicesedgroup.org
Junior Achievement Inc. National Headquarters	http://www.ja.org
KAPOW	www.kapow.org
Micro-Society	http://www.microsociety.org
Mini-Society	http://www.minisociety.com
Study Web	http://www.studyweb.com/
Kaplan Career Center	http://www.kaplan.com/library/Career.html
The Real Game	http://www.realgame.com
National Life Work Center	http://lifework.ca
America's Learning Exchange	http://alx.org
School-to-Work Learning Center	http://www.stw.ed.gov
Elementary Lessons	http://www.contractor.edu

Employment Sites

America's Job Bank	http://www.ajb.dni.us/
Career Builder Network	http://www.careerbuilder.com/
Career Mosaic	http://www.careermosaic.com/



Monster.Com	http://www.monster.com/
Career Magazine	http://www.careermag.com/
HotJobs.com	http://www.hotjobs.com/
The Chronicle of Higher Education	http://chronicle.com/
Jobs in Higher Education	http://www.gslis.utexas.edu/~acadres/jobs/index.html
Washington Post	http://washingtonpost.com/wp/-adv/classifieds/careerpost/
National Association of Colleges and Employers JOBWEB	www.jobweb.org
Career City	http://www.careercity.com
N.J. Labor Market	http://state.nj.us/labor/lra
America's Job Network	http://usworkforce.org/

Job-Seeking Tips (Resumes, Interviewing, etc.)

Fortune Magazine's Job Hunting Guide	http://www.pathfinder.com/fortune/careers/guide/index.html
Princeton Review Career Page	http://www.review.com/career/templates/temp1.cfm?body=index.cmf
Mike Farr's On-Line Get a Job Workshop	http://www.jist.com/jist/jobwork.htm
College Grad Job Hunter	http://www.collegegrad.com/
10 Minute Resume	http://www.10minuteresume.com/
The Resume Shop	http://www.cyber-north.com/resume/
Careers On Line	http://www.careersonline.com/

Comprehensive Sites

The Job Hunters Bible (What Color is Your Parachute?)	http://www.jobhuntersbible.com/
Fortune Magazine Career Resource Center	http://www.pathfinder.com/fortune/careers/
U.S. News & World Report's Career Guide	http://www.usnews/nycu/work/wo99car.htm
The Riley Guide	http://www.rileyguide.com
Workforce New Jersey Public Information Network	http://www.wnjp.in.state.nj.us/
One-Stop Sites	http://www.wnjp.in.state.nj.us/OneStopCareerCenter/ Welcome/onestops_new/onestops_main.htm
U.S. Department of Education	http://www.ed.gov/free/comment.html
John J. Heldrich Center for Workforce Development	www.heldrich.rutgers.edu

Internet Search Engine Career-Planning Sites

Yahoo Career Resource Directory	http://dir.yahoo.com/Business_and_Economy/Employment_and_Work/
Excite Career Planning Directory	http://www.excite.com/careers/career_planning
Go Network/Infoseek Career Center	http://infoseek.go.com/Careers/
Lycos Career Directory	http://lycos.com/careers
Altavista Career Directory	http://careers/av.com/
HotBot Career Info	http://directory.hotbot.com/Business/Jobs/Careers/

Financial Aid Information

Student Financial Assistance Program	http://www.ed.gov/offices/OSFAP/Students/sfa.html
College Connection Financial Aid Resources	http://www.careermosaic.com/cm/cc/cc23.html
The Smart Student Guide to Financial Aid	http://www.finaid.org/
Education Assistance Corporation	http://eac-easci.org/

Academic Connections to the Real World

The Futures Channel	http://www.thefutureschannel.com
NEA Useful Web Sites for Educators	http://www.nea.org/cet/links
	http://nea.org/cet/bits.html

Consumer and Financial Skills

Consumer Rights	http://www.state.me.us/ag/clg1.htm
Office of Fair Trade	http://www.oft.gov.uk/html/consume/general.htm
AARP Webplace	http://www.aarp.org/programs/consumer/
CreditComm Services	http://creditcomm.com/reference/bconrite.html
Kids' Money Kids' Page	www.kidsmoney.org/kids.htm
Jump Start	www.jumpstartcoalition.org

Business and Industry Information

New Jersey Business and Industry Association	http://www.njbia.org/
National AFL-CIO	http://www.aflcio.org/home.htm
National Alliance of Business	http://www.nab.org/
National Skills Standards Board	http://www.nssb.org
United States Department of Labor	http://www.dol.gov/
National Alliance of Business	http://www.nab.com/
Employment N.J. Network	http://www.employ.com/schedule/enjsched.html
Consumer Information Center	www.pueblo.gsa.gov
EntrepreNet	www.enterprise.org
Home Office Association of America	www.hoaa.com
Minority Business Development Agency	www.mbda.gov
National Foundation for Women Business Owners	www.nfwbo.org
Smart Business Supersite	www.smartbiz.com
U.S. Business Advisor	www.business.gov
U.S. Small Business Administration	www.sba.gov
American Bar Association	www.abarnet.org



Standard 2. All students will use technology, information and other tools.

American Library Association	http://www.ala.org
ERIC/EECE Resource List	http://ericeece.org/pubs/reslist/compsw.html
Microsoft in Education	http://www.microsoft.com/education/schools/default.htm
Information Technology K-6	http://crlt.canberra.edu.au/lessonplans/
ITAA Workforce and Education	http://www.itaa.org/workforce
Techforce Initiative	http://www.technworkforce.org/programs/stw.htm
U.S. Department of Commerce	http://www.ta.doc.gov/Go4IT/
The Computer Museum	http://www.tcm.org
America's Learning Exchange	http://www.alx.org
Jones Telecommunications and Multimedia Encyclopedia	http://www.digitalcentury.com/encyclo/update/comp_hd.html
NetLingo	http://www.internet-trainer.com/glossary.htm

Standard 3. All students will use critical thinking, decision-making, and problem-solving skills.

U.S. Department of Education	http://npin.org/respar/texts/home/sum9to12.html
The Learning Resource	http://fox.nstn.ca/~huot/generic.html
Design a Study	http://www.designastudy.com/teaching/tips-0198.html
EduPlace Games	http://www.eduplace.com/kids/links/kids_2.htm
AboutCom	http://7-12educators.miningco.com/education/7-12educators/msub21.htm
MegaSpider	http://www.hawaii.edu/suremath/sites.html
ERIC	http://ericae.net/edo/ed297003.htm
ERIC	http://ericae.net/edo/ed385606.htm
National Parent Information Network	http://npin.org/
10 Suggestions for Teaching...	http://www.id.ucsb.edu/IC/TA/tips/prob.html

Standard 4. All students will demonstrate self-management skills.

KCDC	http://www.kcdc.sk.ca/sea/page1.asp
California Department of Education	http://www.cde.ca.gov/iasa/cooplrg.html
The Cooperative Learning Center at the University of Minnesota	http://www.clcrc.com/pages/assess.html
Center for the Study of Classroom Processes	http://artsci-ccwin.concordia.ca/education/cscp/Try.htm
Learning Together, Canisius College	http://www.canisius.edu/~weibelt/together.html
EdWeb	http://www.edweb.com.au/StudyGuides/index.html
New York Department of Labor	http://www.wdsny.org/visions/keep_your_flavor.htm
University of Maryland, Gender Studies	http://www.inform.umd.edu:8080/EdRes/Topic/WomensStudies/GenderIssues/

Sexual Harassment Issues	http://www.vix.com/pub/men/harass/harass.html
Sexual Harassment	http://www.cs.utk.edu/~bartley/other/9to5.html
The Study Skills Home Page	http://www.geocities.com/Athens/Parthenon/5866/
Memory Principles	http://www.mtsu.edu/~studskl/mem.html
Study Skills for Effective Living	http://sol.brunel.ac.uk/~jarvis/study/index.html

Standard 5. All students will apply safety principles.

First Aid Online	http://www.wps.com.au/business/firstaid/firstaid.htm
Healthanswers.com	http://www.healthanswers.com/health_answers/search_get_answer/forums/safety/info.htm
Young Worker Safety	http://www.stw.ed.gov/youngworkers/index.htm
Occupational Safety and Health Administration	http://www.osha-slc.gov/OshStd_toc/OSHA_Std_toc.html
USDOE Cross-Site Indexing Project	http://search.ed.gov/csi/eric.html
OSHA Compliance and Regulations	http://www.osha.gov/comp-links.html
OSHA Facts	http://www.osha-slc.gov/OshDoc/OSHFacts/OSHAfacts.html
Workplace Literacy	http://ericacve.org/docs/wkpl158.htm
Safe Schools	http://www.eohsi.rutgers.edu/
National Fire Protection Association	www.nfpa.org
Federal Emergency Management Association	www.fema.gov
United States Fire Administration	www.usfa/fema/gov
American Red Cross	www.redcross.org
American Industrial Hygiene Association	www.aiha.org
Fire and Safety Directory	www.firesafe.com
Safety Information	www.safetyinfo.com
Daily News Service/Security Magazine	www.secmag.com
International Association of Fire Fighters	www.sprinklemet.org
Crowd Management Strategies	www.crowdsafe.com
National Crime Prevention Council	www.ncpc.org
American Cancer Society	www.cancer.org
N.J. Cancer Information	www.state.nj.us/health/cancer.htm
Environmental Consultation and Enforcement	www.state.nj.us/dep
EPA Indoor Air Quality Information	
Clearing House	www.epa.gov/iaq
EOHSI Resource Center	www.eohsi.rutgers.edu/cet
NIOSH Technical Information Service	www.cdc.gov/niosh/inquiry.htm
Public Employers Occupational Safety and Health (PEOSH)	www.state.nj.us/health/eoh/peoshweb
CDC Office on Smoking and Health	www.cdc.gov/tobacco
Right to Know (RTK) about hazardous substances public sector	www.state.nj.us/health/eoh/rtkweb



Consumer and Environmental Health Services	www.state.nj.us/health/eoh/leasb/index.html
NJ Poison Information and Education System (NJPIES)	www.state.nj.us
Center for Disease Control-Prevention	www.cdc.gov

PROJECT-BASED LEARNING

School-to-Work Project Based Learning:	
A How-To-Guide	http://www.nysed.gov/workforce/stw.htm
Buck Institute for Education: PGL Overview	www.bie.org/pbl
Less Teaching and More Learning	http://gseweb.harvard.edu/~ncsall/gaer.htm
Knowledge in Action: The Promise of Project-Based Learning	http://gseweb.harvard.edu/~ncsall/wrigley.htm
Turning Obstacles into Opportunities	http://gseweb.harvard.edu/~ncsall/johnson.htm
Project-Based Learning	http://scholar.coe.uwf.edu/pacee
Project-Based Learning with Multimedia	http://pblmm.K12.ca.us/PBLGuide
Why do "Project Based Learning"?	http://arundel.sancarlos.k12.ca.us/a_staff/garber/PBL_why.html

Integrated Curriculum and Interdisciplinary Teaching

CloseUp #16 Integrated Curriculum	http://www.ssec.org/idis/cohasset/InteCur.htm
Integrated Curriculum, Performance Assessment, and Authentic Learning	http://www.parkcce.org/id/3/intgr.html
Contextual Teaching & Learning	http://www.contextual.org/abs2.htm
In Search of Understanding	http://www.ascd.org/readingroom/books/brooks99book.html
Integrated & Interdisciplinary Curriculum	
Units/Penn State	http://www.personal.psu.edu/faculty/a/m/amj8/curric
People and Their Work-PreK	
Career Choices/Grades 4-5	
Inventions/Grade 6	
Teamwork-Take Me to the Ball Game/Grades 7-8	
Camp Confidence-Creating a Caring Community/Guidance	
Choices/Guidance	
Planning Integrated Curriculum	http://ascd.org/readingroom/books/drake93book.html
Six Steps in Creating a Thematic Unit	http://etrc33.louisiana.edu/etrc/projects/chalpriv/lessons/steps.html
What's Essential? Integrating the Curriculum in Essential Schools	http://www.essentialschools.org/pubs/horace/09/09n04.html
Integrated Curriculum: A Selected Bibliography	http://www.qednsl.qld.gov.au/INTECURR.HTML

OTHER

New Jersey Department of Education	http://www.state.nj.us/education
Public Private Ventures (focus on research and youth)	http://www.ppv.org
Project-Based Learning	www.bie.org
Children, Families, and Learning	http://cfl.state.mn.us/mcis/mcishme.htm
U.S. Department of Education Publications	http://www.ed.gov/pubs/edpubs.html
NCRVE	http://ncrve.berkeley.edu
Olympics	www.olympics.com
Special Olympics	www.specialolympics.org
NASA/Kennedy Space Center	www.ksc.nasa.gov
Liberty Science Center	www.lsc.org
The Real Games	www.realgame.com
Guidelines for Using Students' "Natural Jobs" to Achieve New Jersey Work-Based Learning Handbook	www.stw.ed.gov/Database/Subject2.cfm?RECNO=562
New Jersey Job Shadowing Handbook	www.stw.ed.gov/Database/Subject2.cfm?RECNO=1003
New Jersey's Employer Guide on Insurance-Liability Issues	www.stw.ed.gov/Database/Subject2.cfm?RECNO=1318
Kindness and Justice Challenge	www.dosomething.org/kjchallenge
New Jersey Mathematics Coalition	http://dimacs.rutgers.edu/nj_math_coalition
Invent America	www.inventamerica.com
Young Inventors Award Programs	www.nsta.org/programs
Mind/Brain Learning Principles	http://www.newhorizons.org/ofc_21clcaine.html
Let Me Learn Process	http://www.letmelearn.org
N.J. NIE Project	http://njnie.dl.stevens-tech.edu/curriculum
Teachers' Corner	http://www.specialspecies.com/Pages/teachers_corner/index.html
Acid Rain Watch	http://www.geocities.com/CapeCarnaval/launchpad/8127/acidrain.html
Styles of Education	http://www.edweb.cnidr.org
National Math Trail	www.thefutureschannel.com/nationalmathtrail



Appendix F

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Appendix H

Framework Contributors

Leadership Team

JAY DOOLAN

Acting Assistant Commissioner
Division of Academic and Career Standards
New Jersey Department of Education

THOMAS A. HENRY

Director
Office of School-to-Career and College Initiatives
Division of Academic and Career Standards
New Jersey Department of Education

ROBERT J. RIEHS

Acting Director
Office of Standards and Professional Development
Division of Academic and Career Standards
New Jersey Department of Education

JOSEPH HATRAK, JR.

Manager
Office of Standards and Professional Development
Division of Academic and Career Standards
New Jersey Department of Education

ANN DIGIACOMO

Framework Project Coordinator
Workplace Readiness Coordinator
Office of Standards and Professional Development
Division of Academic and Career Standards
New Jersey Department of Education

WILLIAM D. MILLER

Framework Project Coordinator
Business Representative
Retired AT&T District Manager
Systems Engineering and Program Management

PHYLLIS GARNANT

Education Program Development Specialist
Office of School-to-Career and College Initiatives
Division of Academic and Career Standards
New Jersey Department of Education

PATRICIA O'DRISCOLL

Career Development Consultant
Project Manager
Public Works, Inc.
Pasadena, California

New Jersey Department of Education

KARIN ABBEY

Education Program Development Specialist
Office of Assessment
Division of Academic and Career Standards

NANCY HAZELGROVE

formerly with Office of Innovative Programs
and Initiatives
Division of Academic and Career Standards

DONNA DIMATTIA DOOLY

Management Assistant
Office of Standards and Professional Development
Division of Academic and Career Standards

DIANE KUBINSKI

Education Program Development Specialist
Office of Assessment
Division of Academic and Career Standards

**WILLIAM L. HORAHAN**

Managing Examiner
New Jersey Department of Banking
and Insurance

FRANK S. KARPATI

Counselor
Clifton School District

TANYA OSNOWICH

Office of Communications
New Jersey Department of Environmental
Protection

BRIAN PETERS

Director
New Jersey Department of Labor
Division of Business Services

ANA PICCININNO

Transition Specialist
Middlesex Day Program

JEAN PILLET

Food Industry Advisor
Food Council

MIKALA RAHN

President
Public Works

THOMAS MURPHY

President
The Harwich Group

ALBERT MUSSAD

Morris School District

HARRY ROMAN

Chair, Education Committee
New Jersey Business and Industry
Association/PSE&G

BARRY SCHLEGEL

Executive Director
Employers Occupational Safety and Health Institute—CET

LAURENCE H. SEIDEL

Staff Director
Career Resource Network

RITA WOOD

Family and Consumer Sciences Educator
Rutgers Cooperative Extension of Burlington County

ROBERT WOODFORD

formerly with
New Jersey Business and Industry Association

CALVIN WOODLAND

Vice President of Student Services
Bergen Community College

Writing Team**DEBORAH ADAMS**

Passaic Public Schools

JOHN BRADY

Tinton Falls School District

PATRICIA BRAXTON

Woodstown-Pilesgrove Regional School District

HENRY KEARNS

North Burlington Regional Schools

JOSEPH KEENAN

Vineland School District

JANINA KUSIELEWICZ

Clifton School District